

PAGE 1 OF 4
DATE:06-11-1997
REVISION: B
W.O. NO: 63286
CUSTOMER: KAISER ALUM
LOCATION: MEAD, WA

INFRARAIL SPECIAL NUMBER R712

PURPOSE AND DESCRIPTION:

CUSTOMER REQUIRES A INFRARAIL E SERIES SENSOR WITH THE SAME OPTICS, RANGE AND WAVELENGTH AS A 22A02 SENSOR. IN ADDITION, THE CUSTOMER REQUIRES A SPECIAL 1-11 1/2 NPT THREAD IN PLACE OF THE STANDARD 1 1/4 -18 SENSOR MOUNTING THREADS. DETAILS ARE AS FOLLOWS :

MODEL: DNE99-99C
RANGE: 800 - 1300 DEG. C
OPTICAL RESOLUTION: D/25 AT 5 INCHES
SPECTRUM: 0.7 - 1.08 um

GENERALITY OF APPLICATION AND RESTRICTIONS:

UNRESTRICTED: SUITABLE FOR USE WITH ALL STANDARD OPTIONS.

WRITTEN BY: _____


J. LAKNER

APPROVED BY: _____

DATE: 6-11-97

INFRARAIL SPECIAL NUMBER R712

REVISION: B
DATE:06-11-1997

PRODUCTION INSTRUCTIONS:

START WITH A MODEL DNE31-13C ELECTRONICS MODULE, AND INSTALL M1 MODULE AS PER BILL OF MATERIAL ON PAGE 3.

START WITH A MODEL DNE31-13C SENSOR AND MAKE THE FOLLOWING CHANGES:

1. BUILD THE DETECTOR ASSEMBLY PER L13354, BUT REPLACE ITEM 7 (575892) WITH PART NUMBER 576432 (SPECIAL CONNECTOR WITH GOLD PLATED CONTACTS). OMIT ITEM 14 (640642) 0.7 - 1.0 μ m FILTER.
2. ASSEMBLE THE SENSING HEAD PER ASSEMBLY AND DRAWING NUMBER C11264. **NOTE ITEM NO. 1 DETECTOR FIELD STOP IS P.N. 451324 (0.090" DIA.).**

CALIBRATION INSTRUCTIONS:

CALIBRATE AS PER STANDARD 22A02-13C
Isc @ Tbb 1093°C (2000° F) = 19.0 +/- 0.1uA.

MANUAL INSTRUCTIONS:

GENERIC INFRARAIL SERIES MANUAL.

ATTACHMENTS: SENSING HEAD CURRENT OUTPUT TABLE (0.7 - 1.08 μ m).

INFRARAIL SPECIAL NUMBER R712 CONTINUED,

BILL OF MATERIAL

MODULE M1 REFERENCE: DWG.NO.C11194

SYMBOL	PART NO.	DESCRIPTION			
R1	103922011	RESISTOR	39.2 Kohm	METAL FILM 1/4W 1%	
R44	101872011	RESISTOR	18.7 Kohm	METAL FILM 1/4W 1%	
R54	101243011	RESISTOR	124 Kohm	METAL FILM 1/4W 1%	
R45	101302011	RESISTOR	13.0 Kohm	METAL FILM 1/4W 1%	
R55	105362011	RESISTOR	53.6 Kohm	METAL FILM 1/4W 1%	
R46	109531011	RESISTOR	9.53 Kohm	METAL FILM 1/4W 1%	
R56	108062011	RESISTOR	80.6 Kohm	METAL FILM 1/4W 1%	
R47	106491011	RESISTOR	6.49 Kohm	METAL FILM 1/4W 1%	
R57	101243011	RESISTOR	124 Kohm	METAL FILM 1/4W 1%	
R48	104321011	RESISTOR	4.32 Kohm	METAL FILM 1/4W 1%	
R58	101913011	RESISTOR	191 Kohm	METAL FILM 1/4W 1%	
R49	102801011	RESISTOR	2.80 Kohm	METAL FILM 1/4W 1%	
R59	103093011	RESISTOR	309 Kohm	METAL FILM 1/4W 1%	
R50	101781011	RESISTOR	1.78 Kohm	METAL FILM 1/4W 1%	
R60	104993011	RESISTOR	499 Kohm	METAL FILM 1/4W 1%	
R51	101131011	RESISTOR	1.13 Kohm	METAL FILM 1/4W 1%	
R61	108253011	RESISTOR	825 Kohm	METAL FILM 1/4W 1%	
R52	106650011	RESISTOR	665 ohm	METAL FILM 1/4W 1%	
R53	108870011	RESISTOR	887 ohm	METAL FILM 1/4W 1%	
R62	101404011	RESISTOR	1.40 Mohm	METAL FILM 1/4W 1%	

INFRARAIL SPECIAL NUMBER R712
TEMPERATURE RANGE: 800 TO 1300 DEGREES C
SPECTRUM: 0.70 TO 1.08 MICRONS

TEMPERATURE DEGREES C	SENSOR OUTPUT IN uAMPS	INDICATOR OUTPUT mAMPS
800.0	0.9825	4.000
825.0	1.3408	4.800
850.0	1.8060	5.600
875.0	2.4026	6.400
900.0	3.1597	7.200
925.0	4.1106	8.000
950.0	5.2933	8.800
975.0	6.7512	9.600
1000.0	8.5330	10.400
1025.0	10.6934	11.200
1050.0	13.2931	12.000
1075.0	16.3990	12.800
1100.0	20.0849	13.600
1125.0	24.4313	14.400
1150.0	29.5255	15.200
1175.0	35.4622	16.000
1200.0	42.3430	16.800
1225.0	50.2772	17.600
1250.0	59.3810	18.400
1275.0	69.7783	19.200
1300.0	81.6000	20.000

**DRAWING (S) TOO LARGE
TO SCAN.**

**TO VIEW THE ORIGINAL
DESIGN,**

**A REQUEST TO VIEW
PHYSICAL FILE
IS YOUR NEXT OPTION.**

Acknowledgment



IRCON, INC.
7300 N. Natchez Ave.
Niles, IL 60714 USA

Phone 847-967-5151
Toll Free 800-323-7660
Fax 847-647-0948

REQUEST DATE (MM-DD-YY)
08-04-99

PROMISE DATE (MM-DD-YY)
09-07-99

OUR ORDER NO.
71258

ORDER DATE (MM-DD-YY)
07-27-99

YOUR ORDER NO.

MA29916

TERMS

0.00/0/30

F.O.B.

ORIGIN

CODE

1028 (100.00)

VIA

UPS

SPECIAL SHIPPING INSTRUCTIONS

SOLD TO

CUSTOMER NO.

001608

KAISER ALUMINUM/CHEMICAL
MEAD WORKS
EAST 2111 HAWTHORNE
ATTN: ACCOUNTS PAYABLE
MEAD, WA 99021

SHIPPING ADDRESS

TAX CODE

KAISER MEAD PLANT
EAST 2111 HAWTHORNE ROAD
MEAD, WA 99021

LI	PART NO.	DESCRIPTION	QTY	DSCNT%	UNIT PRICE	AMOUNT
1	DN-HO#2020 <i>W.O.#2586</i>	<p><i>ONE 99</i></p> <p>DN_DNE31-13C IRCON INFRARAIL IRT SENSING HEAD ONLY</p> <p>Consists of the following: 1.0000 - INFRARAIL HEAD ONLY 1.0000 - DN - E SERIES 1.0000 - D/100 RESOLUTION (E) 1.0000 - 800-1300C</p> <p>DN_DNE31-13C</p> <p><i>Redo Special No B712</i> <i>ONE head only Series</i> <i>as Model 22402</i> <i>with 1 1/2" lift. change</i></p> <p><i>Mod - Charge</i></p>	8	0.00	880.00 <i>960.30</i>	7040.00
					<i>#50 ea</i>	
GRAND TOTAL						USD7,040.00

THIS ORDER IS ACCEPTED SUBJECT TO TERMS AND CONDITIONS SHOWN ON THIS AND THE REVERSE SIDE

SHIP TO: IRCON, INC.
7300 N. NATCHEZ AVE.
NILES, IL 60714 USA

IF TAX EXEMPT, PLEASE PROVIDE COPY OF
EXEMPTION OR DIRECT PAYMENT CERTIFICATE.

Acknowledgment



IRCON, INC.
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TERMS

0.00/0/30

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CODE

1028 (100.00)

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UPS

SPECIAL SHIPPING INSTRUCTIONS

SOLD TO

CUSTOMER NO.

001608

KAISER ALUMINUM/CHEMICAL
MEAD WORKS
EAST 2111 HAWTHORNE
ATTN: ACCOUNTS PAYABLE
MEAD, WA 99021

SHIPPING ADDRESS

TAX CODE

KAISER MEAD PLANT
EAST 2111 HAWTHORNE ROAD
MEAD, WA 99021

DNE99

LI	PART NO.	DESCRIPTION	QTY	DSCNT%	UNIT PRICE	AMOUNT
1	DN#1943 <i>W.O.# 2545</i>	<p>DN_DNE31-13C IRCON INFRARAIL IRT SYSTEM-COMLETE</p> <p><i>Reds Special No R712- DNE head as model 22A02 with 1 1/2" NPT threads</i></p> <p>Consists of the following: 1.0000 - INFRARAIL 1.0000 - DN - E SERIES 1.0000 - Std Cbl Lgth 12ft 1.0000 - D/100 RESOLUTION (E) 1.0000 - 800-1300C</p> <p>DN_DNE31-13C</p> <p><i>Mod - chg</i></p>	8	0.00	960.30	7682.40
					<i>\$50-</i>	
GRAND TOTAL						USD7,682.40

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7300 N. NATCHEZ AVE.
NILES, IL 60714 USA

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SELECTED FROM TABLE(S) : TDNSH

LV	SEQ#	COMPONENT NO	QUANTITY	UM	SYM/ITEM	DESCRIPTION
01	0010	K-C11264	1.00			(A1) SH FINAL ASSY
01	0020	451324	1.00	EA		FIELD STOP .090DIA
01	0025	"MFG2	8.00			

NOTE: BEFORE YOU INSTALL THE FIELDSTOP, VERIFY THAT
 ** THE CENTER HOLE IS THE ONLY HOLE OF THE FIELDSTOP.
 ** USE A TUBE WITH A LENSE LOOKING THROUGH THE FIELD STOP **
 ** TO A FAR NEON LIGHT. ADJUST THE DISTANCE UNTILL YO CAN **
 ** SEE THE HOLE CLEAR. IF YOU DETECT ANY OTHER HOLE THAN **
 ** THE CENTRAL HOLE, SCRAP THE FIELD STOP!

01	0030	990300005	1.00	EA		2 RETAINING RING 7/16 OD, 237ID WALDES TRUARC NO. 5005-43
01	0040	431442	1.00	EA		3 DET. LOCATOR MOD2
01	0045	"MFG3	6.00			

NOTE: USING A TOOTHPICK AND AIR PRESSURE, CLEAN OUT THE
 *** CENTRAL HOLE OF THE FIELDSTOP. BEFORE INSTALLING ***
 *** ITEM 4, MAKE SURE THE CENTER HOLE WAS PROPERLY ***

01	0050	C11209	1.00			4 SH DETECTOR ASSEMBLY (E-SERIES) (INFRARAIL)
01	0060	447722	1.00	EA		5 SENSOR E-HEAD, SPECIAL RTI2 (1-11 1/2 NPT)
01	0070	610432	1.00	EA		6 EYE LENS FOR A HEAD
01	0080	990100004	1.00			7 EPOXY HB FULLER FE 7004 MIX 2:1 PART A/PART B

AS REQUIRED

01	0090	451273	1.00	EA		20 BIMETAL FLAG PAINTED A/OA S.H. A DWG
01	0100	447382	1.00	EA		21 FIELD STOP, .437 DIA E-HEAD SENSOR B-DWG
01	0110	610412	1.00	EA		11 LENS PLANO CONVEX 5" F/L
01	0120	431752	1.00	EA		10 O RING 13/16 X 1/16 TH 70 DR

01	0130	447362	1.00	EA		12 LENS RING E-HEAD SENSOR B-DWG
01	0140	200412440	4.00	EA		13 SCREW #4-40 X 3/8 FIL SLOT STAINLESS STEEL
01	0150	220403200	4.00	EA		14 WASHER #4 LOCK SPLIT RING STAINLESS STEEL
01	0160	454152	1.00	EA		15 SCREW, ADJUSTMENT, TAMPERPROOF B-DWG
01	0170	433372	1.00	EA		22 O RING 3/32 X 7/32 X 1/16 WIDTH 75 DUROMETER VITON
01	0180	220602200	1.00	EA		23 WASHER #6 LOCK EXT TOOTH STAINLESS STEEL
01	0190	200606040	1.00	EA		24 SCREW #6-32 X 3/16 PH SLOT STAINLESS STEEL
01	0191	"MFG4	4.00			

NOTE: FINGER TIGHT ITEM 24 AT INSTALLATION!

01	0200	999900014	1.00	EA		16 STEM BUMPER 3/8OD .275T BLK RUBBER SPEC
01	0240	4777142	1.00	EA		19 LABEL, SERIAL NUMBER, SENSOR E SERIES, S SERIES C-DWG
01	0250	474772	1.00	EA		25 LABEL GROUND WARNING
01	0260	T-C11264-1	1.00			DETERMINE IF CABLE IS REQUIRED (E-SERIES)
01	0300	"MFG1	5.00			

SELECTED FROM TABLE(S) : TDNSH

LV SEQ# COMPONENT NO QUANTITY UM SYM/ITEM DESCRIPTION

*** THE FOLLOWING PARTS ARE TO BE INSTALLED AFTER CAL. ***

01 0320 990100028 1.00 AR 26 SEALANT RTV SILICONE BLACK DOW CORNING 732 30Z TUBE
01 0330 999900013 1.00 EA 17 CAP PLUG #SC-1-1/4 RED PLASTIC (POLYETHYLENE)

END OF REPORT

Acknowledgment



IRCON, INC.
7300 N. Natchez Ave.
Niles, IL 60714 USA

Phone 847-967-5151
Toll Free 800-323-7660
Fax 847-647-0948

6/28/97
05/17/97

SCHEDULED SHIPPING WEEK ENDING MONTH/DAY/YEAR

SOLD TO CUSTOMER NO. 001608

OUR ORDER NO. SA 063285/00 ORDER DATE MONTH/DAY/YEAR 04/03/97

KAISER ALUMINUM & CHEMICAL CO.
MEAD WORKS
EAST 2111 HAWTHORNE
MEAD WA 99021

YOUR ORDER NO. CB00180

TERMS X NET 30
OTHER

F.O.B. X NILES, ILLINOIS

SHIPPING ADDRESS TAX CODE NO TAX

CODE 528 .00

KAISER ALUMINUM & CHEMICAL CO.
MEAD WORKS
EAST 2107 HAWTHORNE
MEAD WA 99021

VIA UPS PPD. X COLL.

SPECIAL SHIPPING INSTRUCTIONS

4/03/97 PAGE 1

LINE NO.	PART NO.	QTY.	DESCRIPTION	UNIT MEAS	DISCOUNT %	PRICE EACH U.S. DOLLAR	AMOUNT U.S. DOLLAR
01	12		INFRARAIL SENSING HEAD W/O CBL MODEL DNE99-13C SERIAL NBR 001645 THRU 001656 ***** * SPECIAL Z999 * ***** !!!!!!!!!!WARNING!!!!!!!!!! ** SPL # TO BE DETERMINED ** ** SEE ENGINEERING DEPT. **	EA		797.00	9564.00
			SUB TOTALS				9564.00
			GRAND TOTAL				9564.00

Handwritten notes:
 Eng Dept #3253a
 New Special Same as W.O.
 #63286
 Per Worksheet
 RHTJ
 4/8/97

THIS ORDER IS ACCEPTED SUBJECT TO TERMS AND CONDITIONS SHOWN ON THIS AND THE REVERSE SIDE

IF TAX EXEMPT, PLEASE PROVIDE COPY OF EXEMPTION OR DIRECT PAYMENT CERTIFICATE.

Ship To: IRCON, INC.
7300 N. NATCHEZ AVE.
NILES, IL 60714 USA

ORIGINAL

Part No. 020172 Rev C 12/95

TEMPERATURE RANGE: 800 TO 1300 DEGREES C
 SPECTRUM: 0.70 TO 1.08 MICRONS

DEG. C	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
OUTPUT IN uAMPS										
[800]	0.982	0.995	1.008	1.021	1.034	1.047	1.060	1.073	1.087	1.101
[810]	1.114	1.128	1.143	1.157	1.171	1.186	1.201	1.216	1.231	1.246
[820]	1.261	1.277	1.293	1.309	1.325	1.341	1.357	1.374	1.391	1.408
[830]	1.425	1.442	1.459	1.477	1.495	1.513	1.531	1.549	1.568	1.587
[840]	1.606	1.625	1.644	1.664	1.683	1.703	1.723	1.744	1.764	1.785
[850]	1.806	1.827	1.849	1.870	1.892	1.914	1.936	1.959	1.981	2.004
[860]	2.027	2.051	2.074	2.098	2.122	2.146	2.171	2.196	2.221	2.246
[870]	2.272	2.297	2.323	2.349	2.376	2.403	2.430	2.457	2.484	2.512
[880]	2.540	2.569	2.597	2.626	2.655	2.685	2.714	2.744	2.774	2.805
[890]	2.836	2.867	2.898	2.930	2.962	2.994	3.027	3.059	3.093	3.126
[900]	3.160	3.194	3.228	3.263	3.298	3.333	3.369	3.405	3.441	3.478
[910]	3.515	3.552	3.590	3.628	3.666	3.705	3.744	3.783	3.823	3.863
[920]	3.903	3.944	3.985	4.027	4.069	4.111	4.153	4.196	4.240	4.283
[930]	4.327	4.372	4.417	4.462	4.508	4.554	4.600	4.647	4.694	4.742
[940]	4.790	4.838	4.887	4.937	4.986	5.036	5.087	5.138	5.189	5.241
[950]	5.294	5.346	5.399	5.453	5.507	5.562	5.617	5.672	5.728	5.784
[960]	5.841	5.898	5.956	6.014	6.073	6.132	6.192	6.252	6.313	6.374
[970]	6.436	6.498	6.560	6.624	6.687	6.751	6.816	6.881	6.947	7.013
[980]	7.080	7.148	7.216	7.284	7.353	7.422	7.493	7.563	7.634	7.706
[990]	7.778	7.851	7.925	7.999	8.073	8.149	8.224	8.301	8.378	8.455
[1000]	8.533	8.612	8.692	8.772	8.852	8.933	9.015	9.098	9.181	9.265
[1010]	9.349	9.434	9.520	9.606	9.693	9.781	9.869	9.958	10.047	10.138
[1020]	10.229	10.320	10.413	10.506	10.600	10.694	10.789	10.885	10.982	11.079
[1030]	11.177	11.275	11.375	11.475	11.576	11.678	11.780	11.883	11.987	12.092
[1040]	12.197	12.303	12.410	12.518	12.626	12.736	12.846	12.956	13.068	13.181
[1050]	13.294	13.408	13.523	13.638	13.755	13.872	13.990	14.109	14.229	14.350
[1060]	14.472	14.594	14.717	14.841	14.966	15.092	15.219	15.347	15.475	15.605
[1070]	15.735	15.866	15.998	16.131	16.265	16.400	16.536	16.673	16.810	16.949
[1080]	17.088	17.229	17.370	17.513	17.656	17.801	17.946	18.092	18.240	18.388
[1090]	18.537	18.687	18.839	18.991	19.144	19.299	19.454	19.611	19.768	19.927
[1100]	20.086	20.247	20.409	20.571	20.735	20.900	21.066	21.233	21.401	21.571
[1110]	21.741	21.912	22.085	22.259	22.434	22.610	22.787	22.965	23.144	23.325
[1120]	23.507	23.690	23.874	24.059	24.245	24.433	24.622	24.812	25.003	25.195
[1130]	25.389	25.584	25.780	25.977	26.176	26.376	26.577	26.779	26.983	27.188
[1140]	27.394	27.602	27.810	28.020	28.232	28.444	28.658	28.874	29.090	29.308
[1150]	29.528	29.748	29.970	30.194	30.418	30.644	30.872	31.101	31.331	31.563
[1160]	31.796	32.030	32.266	32.504	32.742	32.982	33.224	33.467	33.712	33.958
[1170]	34.205	34.454	34.705	34.956	35.210	35.465	35.721	35.979	36.239	36.500
[1180]	36.762	37.026	37.292	37.559	37.828	38.098	38.370	38.643	38.919	39.195
[1190]	39.474	39.753	40.035	40.318	40.603	40.889	41.177	41.467	41.758	42.052

SELECTED FROM TABLE(S): TDMSH

LV SEQ#	COMPONENT NO	QUANTITY	UM	SYM/ITEM	DESCRIPTION
01 0010	K-C11264	1.00	EA		(A1) SH FINAL ASSY
01 0020	451323	1.00	EA		FIELD STOP 04471A .096D/A
01 0025	"MFG2	8.00	EA		
<p>*** NOTE: BEFORE YOU INSTALL THE FIELD STOP, VERIFY THAT</p> <p>** THE CENTER HOLE IS THE ONLY HOLE OF THE FIELD STOP</p> <p>** USE A TUBE WITH A LENS LOOKING THROUGH THE FIELD STOP</p> <p>** TO A FAR NEON LIGHT ADJUST THE DISTANCE UNTILL YOU CAN</p> <p>** SEE THE HOLE CLEAR IF YOU DETECT ANY OTHER HOLE THAN</p> <p>** THE CENTRAL HOLE, SCRAP THE FIELD STOP!</p>					
01 0030	990300005	1.00	EA	2	RETAINING RING 7/16 OD, 23TID VALDES TRIUARC NO. 5005-43
01 0040	431442	1.00	EA	3	DET LOCATOR ROD2
01 0050	C11209	1.00	EA	4	SH DETECTOR ASSEMBLY (E-SERIES)(INFRARED)
01 0060	447722	1.00	EA	5	SENSOR E-HEAD, SPECIAL R712 (1-11 1/2 NPT)
01 0070	610432	1.00	EA	6	EYE LENS FOR A HEAD
01 0090	990100604	1.00	EA	7	EPOXY HB FULLER FE 7004 MIX 2:1 PART A/PART B AS REQUIRED
01 0090	451273	1.00	EA	20	PIRITAL FLAG PAINTED A/OA S H
01 0100	447382	1.00	EA	21	FIELD STOP, .437 DIA
01 0110	610412	1.00	EA	11	LENS PLANO CONVEX 5" F/L
01 0120	431752	1.00	EA	10	O RING 13/16 X 1/16 TH 70 DR
01 0130	447362	1.00	EA	12	LENS RING E-HEAD SENSOR
01 0140	200412440	4.00	EA	13	SCREW #4-40 X 3/8 FIL SLOT
01 0150	220403200	4.00	EA	14	WASHER #4 LOCV SPLIT RING
01 0160	454152	1.00	EA	15	SCREW, ADJUSTMENT
01 0170	433372	1.00	EA	22	O RING 3/32 X 7/32 X 1/16
01 0180	220602200	1.00	EA	23	WASHER #6 LOCK EXT 100TH
01 0190	200606040	1.00	EA	24	SCREW #6-32 X 3/16 PR SLOT
01 0200	990900014	1.00	EA	16	STEM BUMPER 3/800 275T
01 0240	477142	1.00	EA	19	LABEL, SERIAL NUMBER, SENSOR
01 0250	474772	1.00	EA	25	LABEL GROUND WARNING
01 0260	T-C11264-1	1.00	EA		DETERMINE IF CABLE IS REQUIRED (E-SERIES)
01 0300	"MFG1	5.00	EA		

*** THE FOLLOWING PARTS ARE TO BE INSTALLED AFTER CAL ***

01 0320 99010002S 1.00 AP 26 SEALANT RTV SILICONE SLACK DOJ CONNING 732 302 TUBE

999900013 1.00 17 GAP PLUG #5C-1-1/4

END OF REPORT

Part Number	Description	EA	38	124.04	00
H-C11201-A	ASSEMBLY LABOR	1			00
K-C11201	(A1) SH FINAL ASSY	1			00
451322	FIELD STOP .022DIA	1		.28	00
990300005	RETAINING RING 7/16 OD, 237ID	1		.00	00
431442	DET. LOCATOR MODS	1		.10	00
C11209	SH DETECTOR ASSEMBLY (E-SERIES	1		.00	00
447352	SENSOR, E-HEAD	1		64.90	00
610432	EYE LENS FOR A HEAD	1		4.24	00
990100004	EPOXY HB FULLER FE 7004	1		.00	00
447372	FIELD STOP, .312 DIA	1		3.40	00
447382	FIELD STOP, .437 DIA	1		2.75	00
610402	LENS PLANO CONVEX 30" F/L	1		9.69	00
437752	O RING 13/16 X 1/16 TH 70 DR	1		.11	00
447362	LENS RING E-HEAD SENSOR	1		12.10	00
200412440	SCREW #4-40 X 3/8 FIL SLOT	4		.00	00
220403200	WASHER #4 LOCK SPLIT RING	4		.00	00
454152	SCREW, ADJUSTMENT,	1		21.00	00
433372	O RING 3/32 X 7/32 X 1/16	1		.13	00
220602200	WASHER #6 LOCK EXT TOOTH	1		.00	00
200604040	SCREW #6-32 X 3/16 PH SLOT	1		.00	00
999900014	STEM BUMPER 3/8OD .275T	1		.00	00
443502	RETAINING NUT	1		4.35	00
477142	LABEL, SERIAL NUMBER, SENSOR	1		.79	00
474772	LABEL GROUND WARNING	1		.20	00
T-C11201-1	DETERMINE IF CABLE IS REQUIRED	1		.00	00
"MEG1	ELEMENT NOT FOUND!	5		.00	00
999900013	CAP PLUG #SC-1-1/4	1		.00	00
990100028	SEALANT RTV SILICONE BLACK	1		.00	00
TOTAL		38		124.04	00

PARTS COST	124.04
PARTS LABOR	.00
ASSEM LABOR	.00
TOTAL BOM	124.04

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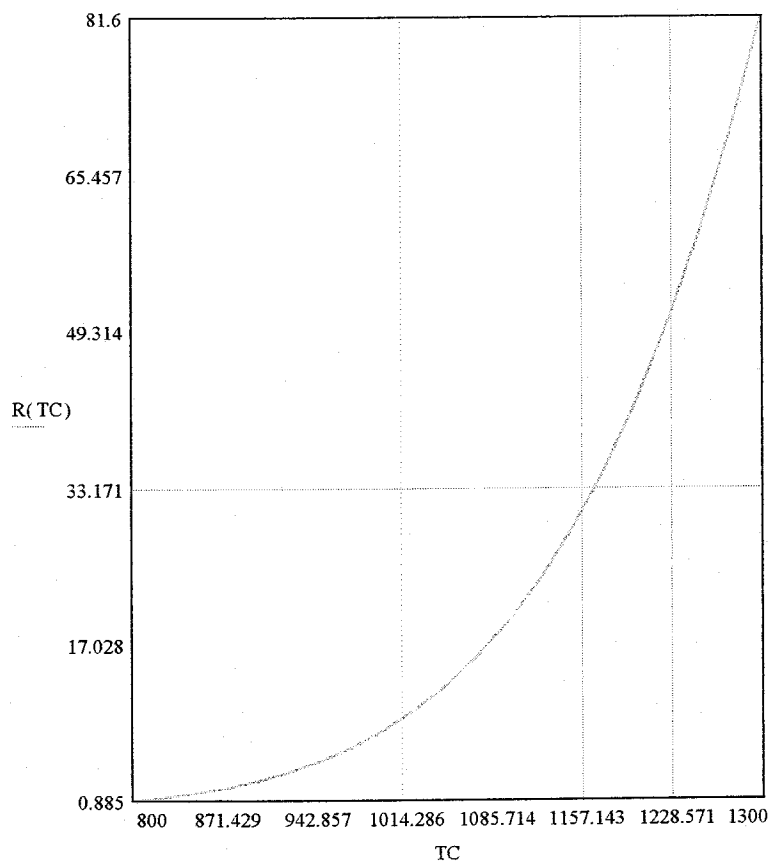
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NUMBER	DESC	U/M	QUANT	STD COST	STD LABOR
4	K-C11264 (A1) SH FINAL ASSY		1	00	00
5	FIELD STOP 0.44 DIA . 090"DIA	EA	1	08	00
6	ELEMENT NOT FOUND!		8	00	00
7	RETAINING RING 7/16 OD, 237ID		1	00	00
8	DET. LOCATOR MODE	EA	1	10	00
9	SH DETECTOR ASSEMBLY (E-SERIES		1	00	00
10	SENSOR E-HEAD, SPECIAL P712	EA	1	00	00
11	EYE LENS FOR A HEAD	EA	1	4.24	00
12	EPOXY HB FULLER FE 7004	EA	1	00	00
13	BIMETAL FLAG PAINTED A/0A S.H	EA	1	4.16	00
14	FIELD STOP, .437 DIA	EA	1	2.75	00
15	LENS PLANO CONVEX 5" F/L	EA	1	7.92	00
16	O RING 15/16 X 1/16 TH 70 DR	EA	1	1.11	00
17	LENS RING E-HEAD SENSOR	EA	1	12.10	00
18	SCREW #4-40 X 3/8 FIL SLOT	EA	4	00	00
19	WASHER #4 LOCK SPLIT RING	EA	4	00	00
20	SCREW, ADJUSTMENT,	EA	1	21.00	00
21	O RING 3/32 X 7/32 X 1/16	EA	1	1.13	00
22	WASHER #6 LOCK EXT T00TH		1	00	00
23	SCREW #5-32 X 3/16 PH SLOT		1	00	00
24	STEM BUMPER 3/8OD .275T		1	00	00
25	LABEL, SERIAL NUMBER, SENSOR	EA	1	79	00
26	LABEL GROUND WARNING	EA	1	20	00
27	T-C11264-1 DETERMINE IF CABLE IS REQUIRED		1	00	00
28	"MFG1		5	00	00
29	SEALANT RTV SILICONE BLACK		1	00	00
30	TOTAL		43	53.52	00
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100					

PARTS COST 53.52
 PARTS LABOR 00
 ASSEM LABOR 00
 TOTAL BOM 53.52

TC	R(TC)
1300	81.6
1275	69.540139
1250	58.968525
1225	49.743919
1200	41.733377
1175	34.812247
1150	28.864139
1125	23.780844
1100	19.462218
1075	15.81603
1050	12.757771
1025	10.210417
1000	8.104175
975	6.37618
950	4.970173
925	3.836152
900	2.929993
875	2.213065
850	1.651822
825	1.21739
800	0.885152

page 4
 Ircon, Inc.
 j. lakner



IRCON COMPONENT SPECIFICATION

PART NO: 575892

REVISION ECO # APPROVALS DATE

A 3501 *Job G.F. 12/27/95**\$ 5.00
5/1 26.00*COMPUTER DESCRIPTION:
CONN. CIRC 3 RECPT 10SL-3
BOX MOUNT RECPT NICKEL PLT*BOB
1348-2996**PEI - GENESIS
(500) 523-0727*

ADDITIONAL DESCRIPTION:

209

SOURCES:

PEI-GENESIS (ITT-CANNON #CA02COME10SL-3PB)

ATTACHMENTS (Y/N) ? Y

MATERIAL SAFETY DATA INFORMATION:

NEW CHEMICAL MSDS RECEIVED ON
For Sample only Routine Use
Previously purchased chemical: Active Index No:
MSDS REQUIRED NNote: Fasteners must conform to Industrial Fasteners Institute,
unless otherwise specified

COMMENTS:

ESTIMATED ANNUAL USAGE:

DESIGN ENGINEER: T. TAM *T.T.* DATE: 08/09/95

APPROVED BY: J. BECK DATE: 08/15/95

ENTERED IN COMPUTER BY: JUDY DATE: 08/09/95



Engineering Special or System Request

From: R. H. Breary Date: 7/19/96 Page of
To: Joe Zahner Customer: Kaiser Aluminum

Description of Request: DNE99-99C head only
Base standard model or series:

Price to provide E Head same as 22A02
and also with special threads on
sensor of 1 INCH NPT (11.5 TPI) in lieu of 1 1/4" x 18.
Price for one, price for 100 unit

Plus price for extra 100 sensor ~~but not for~~

Details of specific approval: PLUS Gold Contacts on Connector

Price 1 unit only \$1,400

Price Additional units \$325 each

GOLD CONTACTS

Specific Exceptions: _____

Price: SEE Above
(adder to standard)

Delivery: 6-8 wks purchas.
(adder to standard)

Approved by: [Signature]

Date: 7-29-96

IRCON COMPONENT SPECIFICATION

PART NO: 57643-2

REVISION	ECO #	APPROVALS	DATE
----------	-------	-----------	------

COMPUTER DESCRIPTION:

CONN. CIRC 3 RECEPT 10SL-3
BOX MOUNT RECEPT GOLD CONT

ADDITIONAL DESCRIPTION: GOLD CONTACTS

SOURCES:

PEI-GENESIS (ITT-CANNON # CA0ZCOME10SL-3PB-A176)

ATTACHMENTS (Y/N) ?

MATERIAL SAFETY DATA INFORMATION:

NEW CHEMICAL MSDS RECEIVED ON

For Sample only Routine Use

Previously purchased chemical: Active Index No:

MSDS REQUIRED N

Note: Fasteners must conform to Industrial Fasteners Institute,
unless otherwise specified

COMMENTS:

ESTIMATED ANNUAL USAGE:

DESIGN ENGINEER: J. LAKNER

DATE: 4-10-97

APPROVED BY: J.L

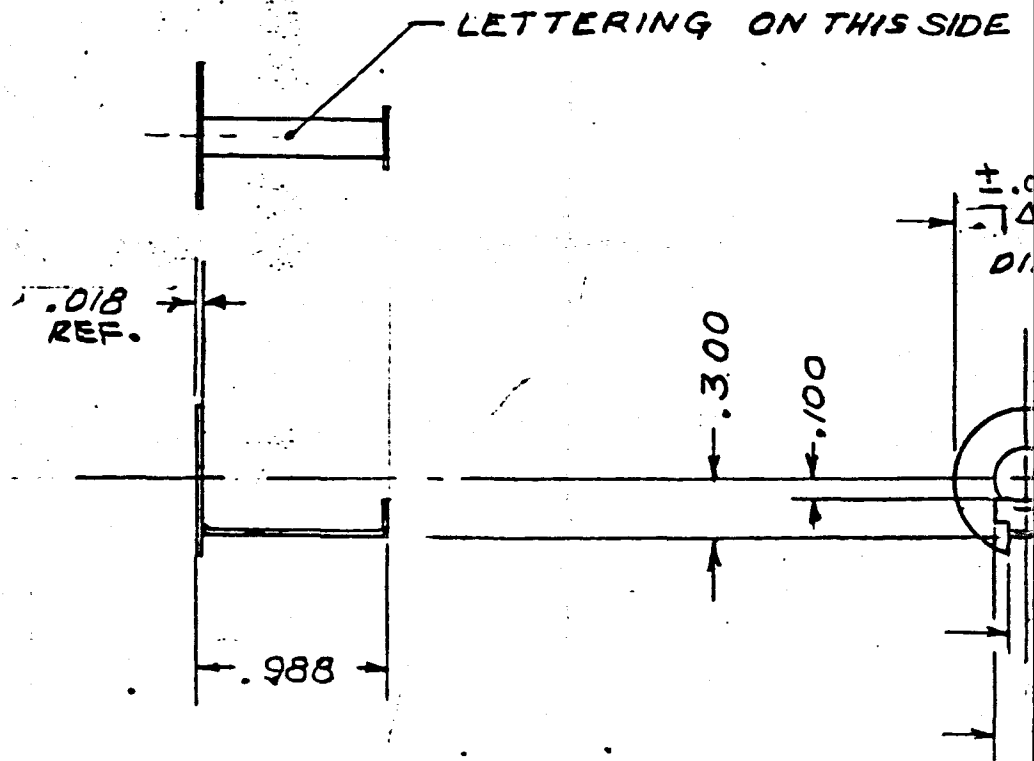
DATE: 4-10-97

ENTERED IN COMPUTER BY:

DATE: 4-10-97

NOTES:

1. MATERIAL= BI-METAL $.018 \pm .005$ THICK
CHACE #6650,
T.I. # P675R,
PMC #721-675
2. PART TO BE FREE OF BURRS.
3. FINISH= PAINT ENTIRE PART OPTICAL FLAT BLACK,
(SULLIVAN PAINT CO. #23BK3047).
BAKE AT 300 °F FOR 30 MINUTES.
4. ALL DIMENSIONS MUST BE MAINTAINED
WITHIN TOLERANCE AFTER PAINTING.



ALL DIMENSIONS ARE IN INCHES UNLESS

TOLERANCES (UNLESS OTHERWISE S

2 PLC. DEC. = \pm

3 PLC. DEC. = $\pm .010$

ANGULAR = \pm

T.I.R. CONCENTRICITY = \pm

DWG. NO.

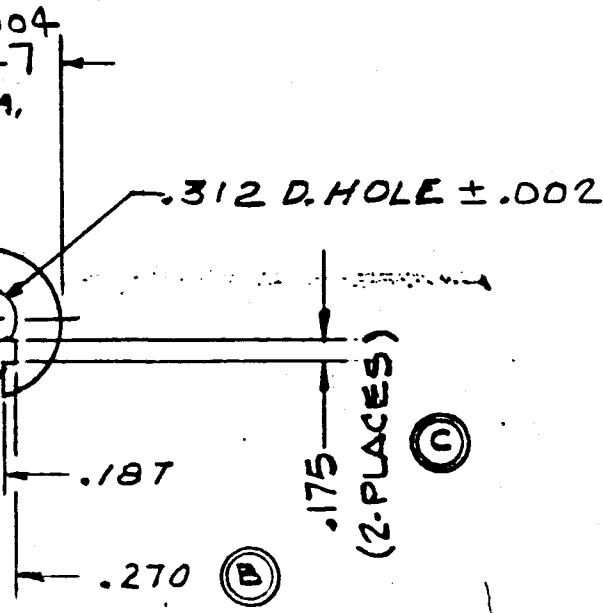
45127-3

REV.

F

REVISIONS

- D ECO# 2431
REDRAWN PART, WAS
"A" SIZE.
5/31/90 PP
- E ECO# 2552
CHANGE DIM. FROM .745^{+0.004}_{-0.002}
TO .747 ± .004
12/9/91 JAB
- F ECO# 2811
SEPARATED DRAWINGS
45127-2 UNPAINTED PART
45127-3 PAINTED PART
10/20/92 JAB



"L" ASS'Y

NEXT HIGHER ASS'Y

USED ON MODLINE II

OTHERWISE SPECIFIED DO NOT SCALE PRINT

SPECIFIED)	DRAWN BY	DATE
	PP	5/31/90
APPROVED BY		
M.E.	E.E.	
SCALE	1 = 1	



IRCON, INC. ENGINEERING DEPT.
SKOKIE, ILLINOIS, U.S.A.

TITLE BI-METAL FLAG
PAINTED

DRAWING NO.	REV.
45127-3	F

Acknowledgment



IRCON, INC.
7300 N. Natchez Ave.
Niles, IL 60714 USA

Phone 847-967-5151
Toll Free 800-323-7660
Fax 847-647-0948

6/28/97
05/17/97

SCHEDULED SHIPPING WEEK **ENDING** MONTH/DAY/YEAR

SOLD TO CUSTOMER NO. **001608**

OUR ORDER NO. **SA 063286/00** ORDER DATE MONTH/DAY/YEAR **04/03/97**

**KAISER ALUMINUM & CHEMICAL CO.
MEAD WORKS
EAST 2111 HAWTHORNE
MEAD WA 99021**

YOUR ORDER NO. **CB00179**

TERMS NET 30
 OTHER

SHIPPING ADDRESS TAX CODE **NO TAX**

CODE **528 .00**

**KAISER ALUMINUM & CHEMICAL CO.
MEAD WORKS
EAST 2107 HAWTHORNE
MEAD WA 99021**

VIA **UPS** PPD. COLL.

SPECIAL SHIPPING INSTRUCTIONS

LINE NO.	PART NO.	QTY.	DESCRIPTION	UNIT MEAS	DISCOUNT %	PRICE EACH U.S. DOLLAR	AMOUNT U.S. DOLLAR
01	108		INFRARAIL SENSING HEAD W/O CBL MODEL DNE99-13C SERIAL NBR 001657 THRU 001764 ***** * SPECIAL 2999 <i>New Special E Head with</i> * <i>11" NPT threads,</i> ***** !!!!!!!!!!WARNING!!!!!!!!!! ** SPL # TO BE DETERMINED ** ** SEE ENGINEERING DEPT. **	EA		797.00	86076.00
			SUB TOTALS <i>head</i>				86076.00
			GRAND TOTAL <i>and Gold Connectors</i>				86076.00

Eng. Dept - \$325/unit
Sum of 22402
Red Worksheet
PHB 4/8

THIS ORDER IS ACCEPTED SUBJECT TO TERMS AND CONDITIONS SHOWN ON THIS AND THE REVERSE SIDE

IF TAX EXEMPT, PLEASE PROVIDE COPY OF EXEMPTION OR DIRECT PAYMENT CERTIFICATE.

Ship To: IRCON, INC.
7300 N. NATCHEZ AVE.
NILES, IL 60714 USA

ORIGINAL

Purchase Order

Joe L. Walker

~~ATTACHED~~



IRCON, INC.
7300 N. Natchez Ave.
Niles, IL 60714 USA

Phone 847-967-5151
Fax 847-647-0070



001606/773-235-5283

ONUMBER	PAGE	P/O DATE	ORDERTYPE	CHANGE/CANCEL
82674-00	01	04/17/97	NORMAL	ORIGINAL 04/17/97

ORDERED FROM
FOX TOOL CO.
1665 N. MILWAUKEE AVENUE
CHICAGO IL 60547

SHIP TO
IRCON, INC.
7300 N. NATCHEZ AVE.
NILES, IL. 60714

UYER	TERMS	ACKNOWLEDGE	CONFIRM	FOB	SHIP VIA	COL/PPD
DN DEFOE, P/MGR	NET 45	YES	YES	SHIPPING PT.	BEST WAY	PPD

LINE NO.	QTY. ORDERED	BLANKET TYPE	U/M	OUR ITEM NUMBER DESCRIPTION/COMMENTS	YOUR ITEM NUMBER	PRICE/UNIT REQUESTED DATE	EXTENDED PRICE	CHANGE CANCEL
1	125		EA	447722 SENSOR E-HEAD, SPECIAL R712 (1-11 1/2 NPT) COMPLETE PER PRINT		64.900 05/30/97	8,112.50	
ILLINOIS PERMIT #2415-9425						TOTAL EXTENDED PRICE	8,112.50	

FOR RESALE	COMMENTS
<input type="checkbox"/>	ATN TED/FAX 4-17 Q#816

FOR RESALE -
PURCHASE ORDER NUMBER AND IRCON PART NUMBER, (IF STATED)
MUST APPEAR ON ALL ACKNOWLEDGMENTS, PACKING SLIPS AND INVOICES.

THIS ORDER MUST BE ACKNOWLEDGED WITHIN 7 DAYS.
THIS ORDER ACCEPTED SUBJECT TO TERMS AND CONDITIONS SHOWN
ON THIS AND THE REVERSE SIDE.

INTERNAL USE

Part No. 020192 Rev H 10/96
ORDERED BY *[Signature]* CUSTOMER

Purchase Order

Joe L. Walker



IRCON, INC.
7300 N. Natchez Ave.
Niles, IL 60714 USA

Phone 847-967-5151
Fax 847-647-0070



001606/773-235-5283

ORDER NUMBER	PAGE	P/O DATE	ORDER TYPE	CHANGE/CANCEL
82674-00	01	04/17/97	NORMAL	ORIGINAL 04/17/97

ORDERED FROM
FOX TOOL CO.
1665 N. MILWAUKEE AVENUE
CHICAGO IL 60647

SHIP TO
IRCON, INC.
7300 N. NATCHEZ AVE.
NILES, IL 60714

BUYER	TERMS	ACKNOWLEDGE	CONFIRM	FOB	SHIP VIA	COL/PPD
ON DEFOE, P/MGR	NET 45	YES	YES	SHIPPING PT	BEST WAY	PPD

LINE NO.	QTY ORDERED	BLANKET TYPE	U/M	OUR ITEM NUMBER DESCRIPTION/COMMENTS	YOUR ITEM NUMBER	PRICE/UNIT REQUESTED DATE	EXTENDED PRICE	CHANGE CANCEL
1	125		EA	447722 SENSOR S-HEAD. SPECIAL RT12 (1-11 1/2 NPT) COMPLETE PER PRINT		64.900 05/30/97	8,112.50	

ILLINOIS PERMIT #2415-9425

TOTAL EXTENDED PRICE 8,112.50

FOR RESALE

COMMENTS

ATN: TED/FAX 4-17 0#810

FOR RESALE -
PURCHASE ORDER NUMBER AND IRCON PART NUMBER, (IF STATED)
MUST APPEAR ON ALL ACKNOWLEDGMENTS, PACKING SLIPS AND INVOICES.

THIS ORDER MUST BE ACKNOWLEDGED WITHIN 7 DAYS
THIS ORDER ACCEPTED SUBJECT TO TERMS AND CONDITIONS SHOWN
ON THIS AND THE REVERSE SIDE.

INTERNAL USE

ORDERED BY

Part No. 020192 Rev H 10/96

[Signature]
CUSTOMER

**DRAWING(S) TOO LARGE
TO SCAN.**

**TO VIEW THE ORIGINAL
DESIGN,**

**A REQUEST TO VIEW
PHYSICAL FILE
IS YOUR NEXT OPTION.**

INFRARAIL SPECIAL NUMBER R712
TEMPERATURE RANGE: 800 TO 1300 DEGREES C
SPECTRUM: 0.70 TO 1.05 MICRONS

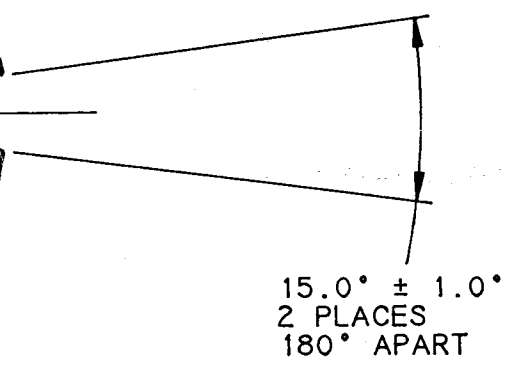
TEMPERATURE DEGREES C	SENSOR OUTPUT IN uAMPS	INDICATOR OUTPUT mAMPS
800.0	0.8851	4.000
825.0	1.2173	4.800
850.0	1.6517	5.600
875.0	2.2129	6.400
900.0	2.9298	7.200
925.0	3.8359	8.000
950.0	4.9699	8.800
975.0	6.3758	9.600
1000.0	8.1037	10.400
1025.0	10.2098	11.200
1050.0	12.7571	12.000
1075.0	15.8152	12.800
1100.0	19.4612	13.600
1125.0	23.7797	14.400
1150.0	28.8629	15.200
1175.0	34.8109	16.000
1200.0	41.7321	16.800
1225.0	49.7427	17.600
1250.0	58.9675	18.400
1275.0	69.5395	19.200
1300.0	81.6000	20.000

**DRAWING (S) TOO LARGE
TO SCAN.**

**TO VIEW THE ORIGINAL
DESIGN,
A REQUEST TO VIEW
PHYSICAL FILE
IS YOUR NEXT OPTION.**

Ø .312 ± .002
HRU

R .005 ± .002
8 PLACES



Ø .755/.753

DRAWING NO.		REV.
44737-2		A
REVISION		
LTR.	DESCRIPTION	BY/DATE
A	ECO 3501 RELEASED TO PRODUCTION	12/28/95 VZJ TCT
<small>THIS DOCUMENT IS THE PROPRIETARY PROPERTY OF IRCON, INC. AND IS NOT PART OF THE PUBLIC DOMAIN. IT IS ISSUED WITH THE EXPRESS UNDERSTANDING AND AGREEMENT THAT IT IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART OR USED FOR FURNISHING INFORMATION TO OTHERS OR USED DIRECTLY OR INDIRECTLY IN ANY WAY THAT IS DETRIMENTAL TO THE INTEREST OF IRCON, INC. IT IS TO BE RETURNED UPON REQUEST BY IRCON, INC. ALL RIGHTS RESERVED</small>		

DO NOT SCALE

SHEET # OF

DATE
6/23/95
DATE
1/9/96
4:1



TITLE
FIELD STOP - .312 DIA

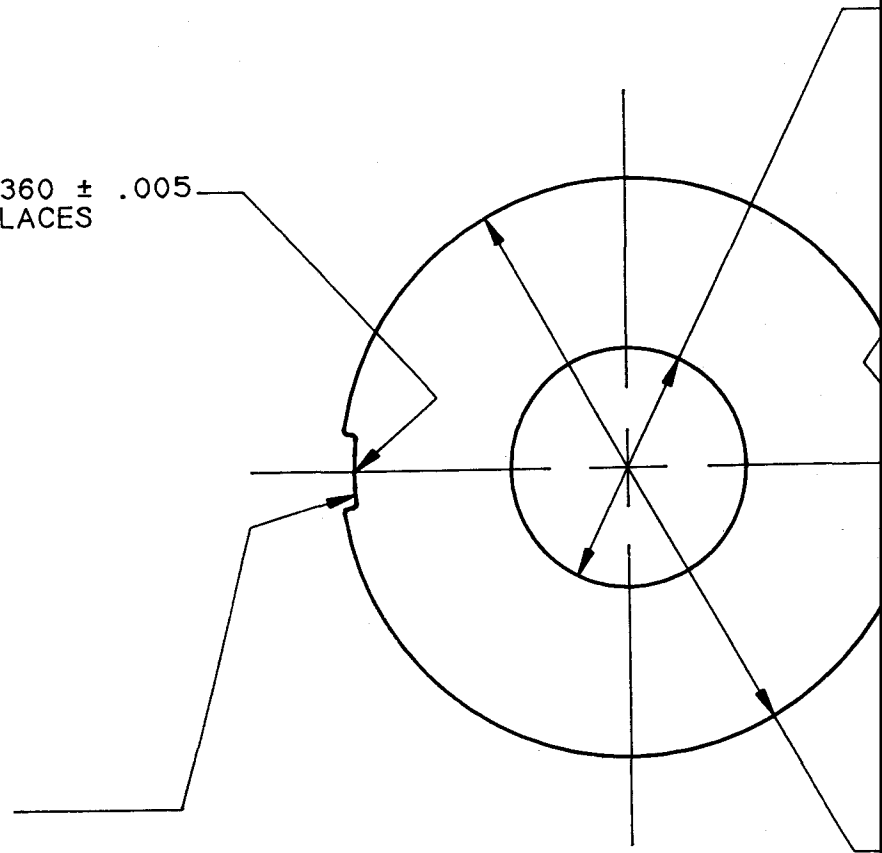
IRCON, INC. 7301 North Caldwell Ave. Niles, IL 60714	
DRAWING NO.	REV.
44737-2	A

NOTES:

1. MATERIAL: BERYLLIUM COPPER SHEET (THICKNESS $.005'' \pm .001''$).
2. FINISH: BLACK OXIDE PER MIL F 495D.

R $.360 \pm .005$
2 PLACES

NOTCHES FOR HOLDING TABS.
REMAINDER OF TABS ARE NOT
TO EXTEND BEYOND $\phi .753$



ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPEC

MATERIAL	DRAWN
	JBG
	APPROV
	TCT
	SCALE

Part Number	Description	Unit	Quantity	Cost	Total
H-D11019-A	ASSEMBLY LABOR - PUR SUPPLY PA		1	00	00
ENG 1	ELEMENT NOT FOUND!		6	00	00
446442	PANEL POWER SUPPLY	EA	1	49.95	00
574962	TERM STRIP 8 CKT PANEL MT	EA	2	2.86	00
20041693P	SCREW #4-40 X 1/2 PH PHL SEM	EA	4	00	00
551072	FILTER RFI 2-STAGE 3-AMP LINE	EA	1	10.24	00
30186X000	WIRE 18AWG BLUE STRANDED	EA	1	00	00
30181X000	WIRE 18AWG BROWN STRANDED	EA	1	00	00
321211400	TUBING 3/16" SHRINKABLE BLACK	EA	1	00	00
3205600X0	TUBING #5 PVC CLEAR	EA	2	00	00
20081293P	SCREW #8-32 X 3/8 PH PHL SEM	EA	15	00	00
C11037	WIRE HARNESS: VOLTAGE SELECTOR		1	00	00
C11035	DETECTOR TEMPERATURE CONTROL A		1	00	00
B11034	PCB SPIKE SUPPRESSOR, POWER S		1	00	00
C11047	FAN ASSEMBLY (LINE SCANNER)		1	00	00
446582	BRACKET RIGHT DC SUPPLY	EA	1	8.52	00
446572	BRACKET LEFT DC SUPPLY	EA	1	9.50	00
141582	POWER SUPPLY +E/+12V/+24V/-12V	EA	1	126.85	00
476772	LABEL ELECTRICAL HAZARD	EA	3	3.19	00
476762	LABEL GROUND	EA	1	2.82	00
446602	COVER SHIELD POWER SUPPLY	EA	1	28.95	00
476602	LABEL TERM STRIP POWER SUPPLY	EA	1	3.29	00
220800030	WASHER #8 FLAT .4380D	EA	2	00	00
210800030	NUT #8-32 HEX STEEL	EA	4	00	00
20081693P	SCREW #8-32 X 1/2 PH PHL SEM	EA	4	00	00
220600030	WASHER #6 FLAT 3/80D	EA	4	00	00
20062893P	SCREW #6-32 X 1/2 PH PHL SEM	EA	4	00	00
476662	LABEL SHIELD COVER I/O BOX	EA	1	4.38	00
D11036	WIRE HARNESS, POWER SUPPLY, LI	EA	1	00	00
301654000	WIRE 16AWG GREEN/YEL STRANDED	EA	1	00	00
342203102	TERM. 20S FASTON 14-16AWG		1	00	00
341312101	TERM. 5/16 RING 16-22AWG		1	00	00
342205101	TERM. 20S FASTON 18-22AWG		3	00	00
321611401	TUEING 1/4" SHRINKABLE BLACK	EA	5	00	00
330000001	TYWRAP SMALL	EA	6	00	00
476652	LABEL VOLTAGE SELECTOR	EA	1	4.60	00

TOTAL 92 254.38 00

PARTS COST 254.38

PARTS LABOR 00

ASSEMB LABOR 00

TOTAL BOM 254.38

Part Number	Description	EA	QTY	UNIT COST	TOTAL COST
K-C10832	(A1) SH FINAL ASSY		1	00	00
T-C10832-1	SELECT DETECTOR FIELD STOP - 2		1	00	00
T-C10832-2	SELECT DETECTOR FIELD STOP - M		1	00	00
990300005	RETAINING RING 7/16 OD, .237ID		1	00	00
431442	DET. LOCATOR-MODE2	EA	1	19	00
C10251	DETECTOR ASSEMBLY - A/OA		1	00	00
443472	SH TYPE A MODE2	EA	1	49	00
610432	EYE LENS FOR A HEAD	EA	1	4	24
990100004	EPOXY HB FULLER FE 7004	EA	1	00	00
451273	BIMETAL FLAG PAINTED A/OA S.H.	EA	1	4	10
443493	OBJECTIVE APERTURE	EA	1	4	06
431412	O RING .75ID X .975OD #018	EA	1	20	00
T-C10832-5	SELECT LENS - 22AXX		1	00	00
T-C10832-6	SELECT LENS - MROAXX		1	00	00
443482	OBJECTIVE LENS RETAINING RING	EA	1	00	00
200412440	SCREW #4-40 X 3/8 FIL SLOT	EA	4	3	35
220403200	WASHER #4 LOCK SPLIT RING	EA	4	00	00
451332	NYLON SET SCREW 10-32	EA	4	00	00
999900014	STEM BUMPER 3/8OD .275T		1	20	00
443502	RETAINING NUT	EA	1	00	00
MMFG1	ELEMENT NOT FOUND!		1	4	35
999900013	CAP PLUG #SC-1-1/4		5	00	00
990100028	SEALANT RTV SILICONE BLACK		1	00	00
T-C10832-7	SELECT S/N LABEL FOR 22AXX OR		1	00	00
T-C10832-X	FLOW TAG TEXT FOR ORDER ASSY		1	00	00

TOTAL	QTY	COST	TOTAL
	35	69.60	00
PARTS COST			69.60
PARTS LABOR			00
ASSM LABOR			00
TOTAL BOM			69.60

431432	DET. HOLDER MR20 SERIES	EA	1	.10	.00
590672	DET. SI VACTEC 21D459	EA	1	12.48	.00
3024EX100	WIRE 24AWG RED STRANDED	EA	2	.00	.00
30249X100	WIRE 24AWG WHITE STRANDED	EA	2	.00	.00
3214G00X0	TUBING #14 PVC CLEAR	EA	1	.00	.00
430292	CONN. GASKET 2000 SERIES	EA	1	.18	.00
571122	CONN. CIRC 3 PLUG 10SL-3 BOX	EA	1	2.73	.00
490042	SPRING DETECTOR RETAINER MODE	EA	1	.35	.00
630092	FOLDING MIRROR SH MROA SERIES	EA	1	10.42	.00
490032	SPRING FOLDING MIRROR MODE	EA	1	1.85	.00
200204130	SCREW #2-56 X 1/8 BH SLOT	EA	1	.00	.00
990100004	EPOXY HB FULLER FE 7004	EA	1	.00	.00

TOTAL	14	28.11	.00
PARTS COST		28.11	
PARTS LABOR		.00	
ASSM LABOR		3.00	
TOTAL BOM		31.11	

LV SEQ#	COMPONENT NO	QUANTITY	UM	SYM/ITEM	DESCRIPTION	
01 0010	431432	1.00	EA	1	DET HOLDER MR20 SERIES	
01 0020	590672	1.00	EA	2	DET SI VACTEC 21D459	VIB-5051 SELECT W/VRX/=2.3MV
01 0030	30242X100	2.50	IN	3	WIRE 24AUG RED STRANDED	IRRADIATED PVC HOOKUP 19 X 36
01 0040	30249X100	2.50	IN	4	WIRE 24AUG WHITE STRANDED	IRRADIATED PVC HOOKUP 19 X 36
01 0050	3214600X0	1.00	EA	5	TUBING #14 PVC CLEAR CUT 2 PIECES TO 3/8 INCHES LONG	.066 ID .016 WALL
01 0060	430292	1.00	EA	6	CONN GASKET 2000 SERIES	
01 0070	571122	1.00	EA	7	CONN CIRC 3 PLUG 10SL-3 BOX	#10 MS BOX MOUNT
01 0080	490042	1.00	EA	8	SPRING DETECTOR RETAINER MOD2	
01 0090	630092	1.00	EA	9	FOLDING MIRROR SH MR0A SERIES	
01 0100	490032	1.00	EA	10	SPRING FOLDING MIRROR MOD2	
01 0110	200204130	1.00	EA	11	SCREW #2-56 X 1/8 BH SLOT	ZINC PLATE
01 0120	990100004	1.00	AR	12	EPOXY HB FULLER FE 7004	MIX 2:1 PART A/PART B

END OF REPORT

DE 1 HSS 9

BOM Number : DN-HO#2020 - IRCON INFRARAIL IRT SO-LI: 71258*1

Level	Part Number	Description	Quantity	UM	Alt	MB	X	ECO No.	ECO Date	Start Use	End Use
1	DN1DNE	DN PRICES	1.0000	EA		M	P				
1	C11264	SENSING HEAD FINAL ASSEMB	1.0000	EA		M	P				
2	451324	FIELD STOP .090DIA	1.0000	EA		B					
2	C11264/01	SEE EXTENDED DESCRIPTION	0.0000	EA		M					
2	990300005	RETAINING RING 7/16 OD, .2	1.0000	EA		B					
2	431442	DET. LOCATOR MOD2	1.0000	EA		B					
2	C11264/02	SEE EXTENDED DESCRIPTION	0.0000	EA		M					
2	C11209	SH DETECTOR ASSEMBLY (E-S	1.0000	EA		M	P				
3	T-C11209-1	SELECT DET. ASSY. (E-SERI	0.0000	EA		B		3770	08-21-96		
2	447722	SENSOR E-HEAD, SPECIAL R7	1.0000	EA		B					
2	610432	EYE LENS FOR A HEAD	1.0000	EA		B					
2	990100004	EPOXY HB FULLER FE 7004	1.0000	EA		B					
2	451273	BIMETAL FLAG PAINTED A/OA	1.0000	EA		B					
2	447382	FIELD STOP, .437 DIA	1.0000	EA		B					
2	610412	LENS PLANO CONVEX 5" F/L	1.0000	EA		B					
2	431752	O RING 13/16 X 1/16 TH 70	1.0000	EA		B					
2	447362	LENS RING E-HEAD SENSOR	1.0000	EA		B					
2	200412440	SCREW #4-40 X 3/8 FIL SLO	4.0000	EA		B					
2	220403200	WASHER #4 LOCK SPLIT RING	4.0000	EA		B					
2	454152	SCREW, ADJUSTMENT,	1.0000	EA		B					
2	433372	O RING 3/32 X 7/32 X 1/16	1.0000	EA		B					
2	220602200	WASHER #6 LOCK EXT TOOTH	1.0000	EA		B					
2	200606040	SCREW #6-32 X 3/16 PH SLO	1.0000	EA		B					
2	C11264/03	SEE EXTENDED DESCRIPTION	0.0000	EA		M					
2	999900014	STEM BUMPER 3/8OD .275T	1.0000	EA		B					
2	477142	LABEL, SERIAL NUMBER, SEN	1.0000	EA		B					
2	474772	LABEL GROUND WARNING	1.0000	EA		B					
2	T-C11264-1	DETERMINE IF CABLE IS REQ	0.0000	EA		B					
2	C11264/04	SEE EXTENDED DESCRIPTION	0.0000	EA		M					
2	990100028	SEALANT RTV SILICONE BLAC	1.0000	EA		B					
2	999900013	CAP PLUG #SC-1-1/4	1.0000	EA		B					
1	NLR712	NEW 'N'# FOR LR712	1.0000	EA		M	P				
2	LR712	SH DET ASSY E-SENSOR SPL#	1.0000	EA		M	P				
3	431432	DET. HOLDER MR20 SERIES	1.0000	EA		B					
3	590672	DET. SI VACTEC 21D459	1.0000	EA		B					
3	560372	CABLE PVC 1 COND SHIELD 2	3.0000	IN		B					
3	312430100	WIRE 24AWG BARE SOLID	1.0000	IN		B					
3	430292	CONN. GASKET 2000 SERIES	1.0000	EA		B					
3	576432	CONN. CIRC 3 RECPT. 10SL-	1.0000	EA		B					
3	490042	SPRING DETECTOR RETAINER	1.0000	EA		B					
3	630092	FOLDING MIRROR SH MROA SE	1.0000	EA		B					
3	490032	SPRING FOLDING MIRROR MOD	1.0000	EA		B					
3	200204130	SCREW #2-56 X 1/8 BH SLOT	1.0000	EA		B					
3	990100016	EPOXY HARDMAN #4001 3-5 M	1.0000	EA		B					
3	3214G00X0	TUBING #14 PVC CLEAR	1.0000	IN		B					

17.9
7.2

BOM Number : DN-HO#2020 - IRCON INFRARAIL IRT

SO-LI: 71258*1

Level	Part Number	Description	Quantity	UM	Alt.	MB	X	ECO No.	ECO Date	Start Use	End Use
1	DN1DNE	DN PRICES	1.0000	EA		M	P				
1	C11264	SENSING HEAD FINAL ASSEMB	1.0000	EA		M	P				
2	451324	FIELD STOP .090DIA	1.0000	EA		B					
2	C11264/01	SEE EXTENDED DESCRIPTION	0.0000	EA		M					
2	990300005	RETAINING RING 7/16 OD,.2	1.0000	EA		B					
2	431442	DET. LOCATOR MOD2	1.0000	EA		B					
2	C11264/02	SEE EXTENDED DESCRIPTION	0.0000	EA		M					
2	C11209	SH DETECTOR ASSEMBLY (E-S	1.0000	EA		M	P				
3	T-C11209-1	SELECT DET. ASSY. (E-SERI	0.0000	EA		B		3770	08-21-96		
2	447722	SENSOR E-HEAD, SPECIAL R7	1.0000	EA		B					
2	610432	EYE LENS FOR A HEAD	1.0000	EA		B					
2	990100004	EPOXY HB FULLER FE 7004	1.0000	EA		B					
2	451273	BIMETAL FLAG PAINTED A/OA	1.0000	EA		B					
2	447382	FIELD STOP, .437 DIA	1.0000	EA		B					
2	610412	LENS PLANO CONVEX 5" F/L	1.0000	EA		B					
2	431752	O RING 13/16 X 1/16 TH 70	1.0000	EA		B					
2	447362	LENS RING E-HEAD SENSOR	1.0000	EA		B					
2	200412440	SCREW #4-40 X 3/8 FIL SLO	4.0000	EA		B					
2	220403200	WASHER #4 LOCK SPLIT RING	4.0000	EA		B					
2	454152	SCREW, ADJUSTMENT,	1.0000	EA		B					
2	433372	O RING 3/32 X 7/32 X 1/16	1.0000	EA		B					
2	220602200	WASHER #6 LOCK EXT TOOTH	1.0000	EA		B					
2	200606040	SCREW #6-32 X 3/16 PH SLO	1.0000	EA		B					
2	C11264/03	SEE EXTENDED DESCRIPTION	0.0000	EA		M					
2	999900014	STEM BUMPER 3/8OD .275T	1.0000	EA		B					
2	477142	LABEL, SERIAL NUMBER, SEN	1.0000	EA		B					
2	474772	LABEL GROUND WARNING	1.0000	EA		B					
2	T-C11264-1	DETERMINE IF CABLE IS REQ	0.0000	EA		B					
2	C11264/04	SEE EXTENDED DESCRIPTION	0.0000	EA		M					
2	990100028	SEALANT RTV SILICONE BLAC	1.0000	EA		B					
2	999900013	CAP PLUG #SC-1-1/4	1.0000	EA		B					
1	NLR712	NEW 'N'# FOR LR712	1.0000	EA		M	P				
2	LR712	SH DET ASSY E-SENSOR SPL#	1.0000	EA		M	P				
3	431432	DET. HOLDER MR20 SERIES	1.0000	EA		B					
3	590672	DET. SI VACTEC 21D459	1.0000	EA		B					
3	560372	CABLE PVC 1 COND SHIELD 2	3.0000	IN		B					
3	312430100	WIRE 24AWG BARE SOLID	1.0000	IN		B					
3	430292	CONN. GASKET 2000 SERIES	1.0000	EA		B					
3	576432	CONN. CIRC 3 RECPT. 10SL-	1.0000	EA		B					
3	490042	SPRING DETECTOR RETAINER	1.0000	EA		B					
3	630092	FOLDING MIRROR SH MROA SE	1.0000	EA		B					
3	490032	SPRING FOLDING MIRROR MOD	1.0000	EA		B					
3	200204130	SCREW #2-56 X 1/8 BH SLOT	1.0000	EA		B					
3	990100016	EPOXY HARDMAN #4001 3-5 M	1.0000	EA		B					
3	3214G00X0	TUBING #14 PVC CLEAR	1.0000	IN		B					

SEC REV. B
J. L. 6-11-97

PAGE 1 OF 4
DATE:04-14-1997
REVISION: A
W.O. NO: 63286
CUSTOMER: KAISER ALUM
LOCATION: MEAD, WA

INFRARAIL SPECIAL NUMBER R712

PURPOSE AND DESCRIPTION: 2

CUSTOMER REQUIRES A INFRARAIL E SERIES SENSOR WITH THE SAME OPTICS, RANGE AND WAVELENGTH AS A 22A07 SENSOR. IN ADDITION, THE CUSTOMER REQUIRES A SPECIAL 1-11 1/2 NPT THREAD IN PLACE OF THE STANDARD 1 1/4 -18 SENSOR MOUNTING THREADS. DETAILS ARE AS FOLLOWS :

MODEL: DNE99-99C
RANGE: 800 - 1300 DEG. C
OPTICAL RESOLUTION: D/25 AT 5 INCHES
SPECTRUM: 0.7 - 1.05 um

GENERALITY OF APPLICATION AND RESTRICTIONS:

UNRESTRICTED: SUITABLE FOR USE WITH ALL STANDARD OPTIONS.

WRITTEN BY: _____

J. LAKNER

APPROVED BY: _____

DATE: 4-14-97

INFRARAIL SPECIAL NUMBER R712

REVISION: A
DATE:04-14-1997

PRODUCTION INSTRUCTIONS:

START WITH A MODEL DNE31-13C ELECTRONICS MODULE, AND INSTALL M1 MODULE AS PER BILL OF MATERIAL ON PAGE 3.

START WITH A MODEL DNE31-13C SENSOR AND MAKE THE FOLLOWING CHANGES:

1. BUILD THE DETECTOR ASSEMBLY PER L13354, BUT REPLACE ITEM 7 (575892) WITH PART NUMBER 576432 (SPECIAL CONNECTOR WITH GOLD PLATED CONTACTS). OMIT ITEM 14 (640642) 0.7 - 1.0 μm FILTER.
2. ASSEMBLE THE SENSING HEAD PER ASSEMBLY AND DRAWING NUMBER C11264.

*Change def F. S
to 45132-4*

CALIBRATION INSTRUCTIONS:

CALIBRATE AS PER STANDARD 22A02-13C

Isc @ Tbb 1300° C = 81.6 μA .

Isc @ Tbb 800° C = 0.944 μA

MANUAL INSTRUCTIONS:

GENERIC INFRARAIL SERIES MANUAL.

INFRAIL SPECIAL NUMBER R712 CONTINUED,

BILL OF MATERIAL

MODEL: DNS10-99C

MODULE M1 REFERENCE: DWG.NO.C11194

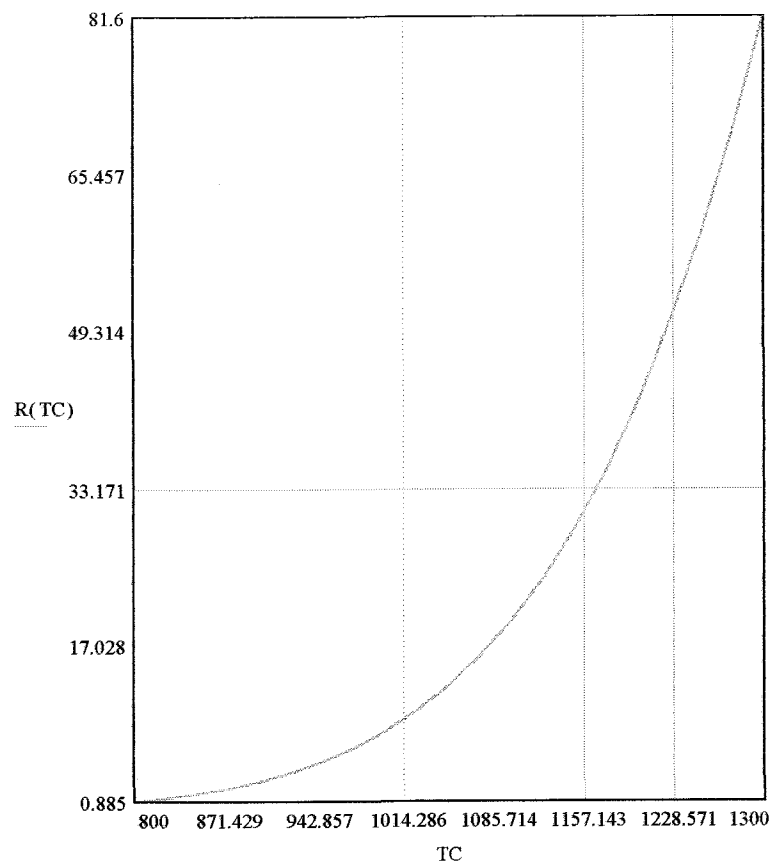
SYMBOL	PART NO.	DESCRIPTION				
R1	103922011	RESISTOR	39.2 Kohm	METAL FILM	1/4W 1%	
R44	101872011	RESISTOR	18.7 Kohm	METAL FILM	1/4W 1%	
R54	101243011	RESISTOR	124 Kohm	METAL FILM	1/4W 1%	
R45	101302011	RESISTOR	13.0 Kohm	METAL FILM	1/4W 1%	
R55	105362011	RESISTOR	53.6 Kohm	METAL FILM	1/4W 1%	
R46	109531011	RESISTOR	9.53 Kohm	METAL FILM	1/4W 1%	
R56	108062011	RESISTOR	80.6 Kohm	METAL FILM	1/4W 1%	
R47	106491011	RESISTOR	6.49 Kohm	METAL FILM	1/4W 1%	
R57	101243011	RESISTOR	124 Kohm	METAL FILM	1/4W 1%	
R48	104321011	RESISTOR	4.32 Kohm	METAL FILM	1/4W 1%	
R58	101913011	RESISTOR	191 Kohm	METAL FILM	1/4W 1%	
R49	102801011	RESISTOR	2.80 Kohm	METAL FILM	1/4W 1%	
R59	103093011	RESISTOR	309 Kohm	METAL FILM	1/4W 1%	
R50	101781011	RESISTOR	1.78 Kohm	METAL FILM	1/4W 1%	
R60	104993011	RESISTOR	499 Kohm	METAL FILM	1/4W 1%	
R51	101131011	RESISTOR	1.13 Kohm	METAL FILM	1/4W 1%	
R61	108253011	RESISTOR	825 Kohm	METAL FILM	1/4W 1%	
R52	106650011	RESISTOR	665 ohm	METAL FILM	1/4W 1%	
R53	108870011	RESISTOR	887 ohm	METAL FILM	1/4W 1%	
R62	101404011	RESISTOR	1.40 Mohm	METAL FILM	1/4W 1%	

INFRARAIL SPECIAL NUMBER R712
TEMPERATURE RANGE: 800 TO 1300 DEGREES C
SPECTRUM: 0.70 TO 1.05 MICRONS

TEMPERATURE DEGREES C	SENSOR OUTPUT IN uAMPS	INDICATOR OUTPUT mAMPS
800.0	0.8851	4.000
825.0	1.2173	4.800
850.0	1.6517	5.600
875.0	2.2129	6.400
900.0	2.9298	7.200
925.0	3.8359	8.000
950.0	4.9699	8.800
975.0	6.3758	9.600
1000.0	8.1037	10.400
1025.0	10.2098	11.200
1050.0	12.7571	12.000
1075.0	15.8152	12.800
1100.0	19.4612	13.600
1125.0	23.7797	14.400
1150.0	28.8629	15.200
1175.0	34.8109	16.000
1200.0	41.7321	16.800
1225.0	49.7427	17.600
1250.0	58.9675	18.400
1275.0	69.5395	19.200
1300.0	81.6000	20.000

TC	R(TC)
1300	81.6
1275	69.540139
1250	58.968525
1225	49.743919
1200	41.733377
1175	34.812247
1150	28.864139
1125	23.780844
1100	19.462218
1075	15.81603
1050	12.757771
1025	10.210417
1000	8.104175
975	6.37618
950	4.970173
925	3.836152
900	2.929993
875	2.213065
850	1.651822
825	1.21739
800	0.885152

page 4
Irrcon, Inc.
j. lakner



For Assembly No. L13121

Date

10/29/92

Release date

10/20/92

Signature

J. P. BL

Item	Part Number	Qty.	Symbol	Description
1	See TLI201	1	---	Detector Field Stop
2	"C" Stock	1	---	Retaining Ring (Industrial #6000-75)
3	43144-2	1	---	Detector Field Stop Locator
4	C-10251	1	---	Sensing Head Detector Assembly (L13350)
5	44347-2	1	---	Sensing Head Body (Type "A")
6	61043-2	1	---	Eye Lens
7	"C" Stock	A/R	---	Epoxy Clear
8	45127-3	1	---	Bi-Metal Comp. Flag, Painted.
9	44349-3	1	---	O.L. Aperture
10	43141-2	1	---	"O" Ring
11	See TLI212	1	---	Lens
12	44348-2	1	---	Retaining Ring, Lens
13	"C" Stock	4	---	Screw, #4-40 x 3/8 Lg. Fillister Head Machine
14	"C" Stock	4	---	Lockwasher, #4 Split Ring
15	45133-2	1	---	Screw, #10-32 x 5/8 Lg. Socket Head Set Screw, Nylok, Cup
16	"C" Stock	1	---	Eye Lens Plug
17	"C" Stock	1	---	Cap Plug (Robroy #C236)
18	44350-2	1	---	Retaining Nut (Sensing Head)
19	See Table I	1	---	Label, Serial Number

TABLE I

SERIES USED ON	PART NUMBER	DESCRIPTION
All Modline II	47292-2	LABEL, Serial Number ("A" & "Z" Heads)
Type "A"		
All Mirage	47540-2	LABEL, Serial Number ("OA" & "OZ Heads")
Type "OA"		



SQUARE D COMPANY
INFRARED MEASUREMENT DIVISION

Title: SENSING HEAD
FINAL ASSEMBLY
(TYPE "A")

Drawing No:
C-10832

Rev:
A

For Assembly No. L13121

Sheet _____
 Release date 10/20/92

Item	Part Number	Qty.	Symbol	Description
				TLI201 (Detector Field Stop)
				BLOCK VALUE MODEL NUMBER PART NUMBER DESCRIPTION
				1 22AX1 45132-2 Detector Field Stop .022 DI
				2 22AX2 45132-4 Detector Field Stop .090 DI
				5 22AX5 45132-3 Detector Field Stop .044 DI
				TLI212 (Lens)
				BLOCK VALUE MODEL NUMBER PART NUMBER DESCRIPTION
				0 22A0X 61041-2 Lens, Object Distance 5"
				1 22A1X 61042-2 Lens, Object Distance 15"
				3 22A3X 61040-2 Lens, Object Distance 30"



SQUARE D COMPANY
 INFRARED MEASUREMENT DIVISION

Title: SENSING HEAD
 FINAL ASSEMBLY
 TYPE "A")

Drawing No: C-10832
 Rev: A

FOX TOOL CO., INC.

1665 N. Milwaukee Avenue
Chicago, Illinois 60647
Phone: (773) 235-5283
Fax #: (773) 235-5075

C. Joe LAKNER
6/4

=====QUOTE ACKNOWLEDGEMENT=====
QUOTE DATE REQUEST FOR QUOTE ID COST. ID QUOTE ID TERMS

06/04/98 QUOTES 100001 001421

TO: IRCON, INC.
7300 N. NATCHEZ AVENUE

ATTENTION: RON DEFOE
847-967-5151

NILES IL
60714

FREIGHT:

DATE DUE: 06/04/98 SALESMAN: ESTIMATOR: 01

PART NUMBER	REV	QUANTITY	UNIT PRICE
DESCRIPTION			
47722	NIL	5	175.00
SENSOR E-HEAD		10	145.00
		15	125.00
		25	95.00

THANK YOU FOR THE INQUIRY.

TED



Engineering Special or System Request

From: JB WB Date: 6/3/98 Page of
 To: Joe Salmer Customer: Kaiser Alum

Description of Request: DNE99-13C Sensor head
 Base standard model or series: Per Special R712.

Price for 6 only

Details of specific approval: _____

IN small qty's our cost is increased
 #115: Adder 2x \$230 to the
 \$300 cost previously
 Also due to someone raiding the stock
 of connectors, it will be approx 4 wks
 for parts

Specific Exceptions: _____

Price: See Above Delivery: 4-6 wks
 (adder to standard) (adder to standard)

Approved by: [Signature] Date: 6 4 98

Acknowledgment



IRCON, INC.
7300 N. Natchez Ave.
Niles, IL 60714 USA

Phone 847-967-5151
Toll Free 800-323-7660
Fax 847-647-0948

SOLD TO _____ CUSTOMER NO. 001608

SCHEDULED SHIPPING WEEK _____ MONTH/DAY/YEAR 08/01/98
ENDING

OUR ORDER NO. _____ ORDER DATE _____ MONTH/DAY/YEAR 06/04/98
SA 065831/00

YOUR ORDER NO. _____ MP86760

KAISER ALUMINUM & CHEMICAL CO.
MEAD WORKS
EAST 2111 HAWTHORNE
MEAD WA 99021

TERMS _____ NET 30 _____
X OTHER _____

F.O.B. _____ NILES, ILLINOIS
X

SHIPPING ADDRESS _____ TAX CODE NO TAX

CODE _____ 528 .00

KAISER ALUMINUM & CHEMICAL CO.
MEAD WORKS
EAST 2111 HAWTHORNE
MEAD WA 99021

VIA _____ PPD. _____ COLL. _____
UPS X

SPECIAL SHIPPING INSTRUCTIONS _____
ATTN: BLDG 300

LINE NO.	PART NO.	QTY.	DESCRIPTION	UNIT MEAS	DISCOUNT %	PRICE EACH U.S. DOLLAR	AMOUNT U.S. DOLLAR
01		6	INFRARAIL SENSING HEAD W/O CBL MODEL DNE99-13C SERIAL NBR 002386 THRU 002391 ***** * SPECIAL Z999 ***** !!!!!!!!!!WARNING!!!!!!!!!! ** SPL # TO BE DETERMINED ** ** SEE ENGINEERING DEPT. **	EA		990.00	5940.00
			SUB TOTALS				5940.00
			GRAND TOTAL				5940.00

Handwritten notes:
 Eng Chg # 230 ea
 Heads Special No R712 -
 Type E head opt see
 like 22A02
 + 1/2" NPT threads
 MHB

THIS ORDER IS ACCEPTED SUBJECT TO TERMS AND CONDITIONS SHOWN ON THIS AND THE REVERSE SIDE

IF TAX EXEMPT, PLEASE PROVIDE COPY OF EXEMPTION OR DIRECT PAYMENT CERTIFICATE.

Ship To: IRCON, INC.
7300 N. NATCHEZ AVE.
NILES, IL 60714 USA

ORIGINAL

Acknowledgment



IRCON, INC.
7300 N. Natchez Ave.
Niles, IL 60714 USA

Phone 847-967-5151
Toll Free 800-323-7660
Fax 847-647-0948

SCHEDULED SHIPPING WEEK MONTH/DAY/YEAR
ENDING 12/19/98

SOLD TO CUSTOMER NO. 001608

OUR ORDER NO. SA 066607/00 ORDER DATE MONTH/DAY/YEAR 10/26/98

YOUR ORDER NO. CB-00452

TERMS NET 30
X OTHER

F.O.B. X NILES, ILLINOIS

SHIPPING ADDRESS TAX CODE NO TAX

KAISER ALUMINUM/CHEMICAL
MEAD WORKS
EAST 2111 HAWTHORNE
MEAD WA 99021

SHIPPING ADDRESS TAX CODE NO TAX

KAISER ALUMINUM/CHEMICAL
MEAD WORKS
EAST 2111 HAWTHORNE
MEAD WA 99021

CODE 528 .00

VIA UPS PPD. X COLL.

SPECIAL SHIPPING INSTRUCTIONS

LINE NO.	PART NO.	QTY.	DESCRIPTION	UNIT MEAS	DISCOUNT %	PRICE EACH U.S. DOLLAR	AMOUNT U.S. DOLLAR
01		30	INFRARAIL SENSING HEAD W/O ZEL EA MODEL DNE99-13C SERIAL NBR 002734 THRU 002763 ***** * SPECIAL Z999 ***** !!!!!!!!!!WARNING!!!!!!!!!! ** SPL # TO BE DETERMINED ** ** SEE ENGINEERING DEPT. **			990.00	29700.00
SUB TOTALS							29700.00
GRAND TOTAL							29700.00

Eng High \$100 ea

Red Special No R 712 - Special

E head name as 22A02 with 1/2" NPT threads

Do, if this delivery is Not OK let me know we must by part I think?

10/29/98

THIS ORDER IS ACCEPTED SUBJECT TO TERMS AND CONDITIONS SHOWN ON THIS AND THE REVERSE SIDE

IF TAX EXEMPT, PLEASE PROVIDE COPY OF EXEMPTION OR DIRECT PAYMENT CERTIFICATE.

Ship To: IRCON, INC.
7300 N. NATCHEZ AVE.
NILES, IL 60714 USA

ORIGINAL

LV SEQ#	COMPONENT NO	QUANTITY	UM	SYM/ITEM	DESCRIPTION
01 0010	431432	1.00	EA	1	DET. HOLDER MR20 SERIES
01 0015	640642	1.00	EA	14	DET. FILTER, BANDPASS
01 0020	590672	1.00	EA	2	DET. SI VACTEC 21D459
01 0030	560372	3.00	IN	3	CABLE PVC 1 COND SHIELD 26 AWG 1 COND. BRAIDED SHIELD
01 0040	312430100	1.00	EA	13	WIRE 24AWG BARE SOLID CUT (1) PIECE TO 1/2 INCHES LONG
01 0060	430292	1.00	EA	6	CONN. GASKET 2000 SERIES
01 0070	575892	1.00	EA	7	CONN. CIRC 3 RECP 10SL-3
01 0080	490042	1.00	EA	8	SPRING DETECTOR RETAINER MODS
01 0090	630092	1.00	EA	9	FOLDING MIRROR SH MR0A SERIES
01 0100	490032	1.00	EA	10	SPRING FOLDING MIRROR MODS
01 0110	200204130	1.00	EA	11	SCREW #2-56 X 1/8 BH SLOT ZINC PLATE
01 0120	990100016	1.00	AR	12	EPOXY HARDMAN #4001 3-5 MINS
01 0130	3214600X0	1.00	EA	15	TUBING #14 PVC CLEAR .066 ID .016 WALL CUT (1) PIECE TO 3/16 INCHES LONG

END OF REPORT

*Boiled Det. MS-1 PER MS-1 (5) All removed from 7 (see 2) with 576432
 576432
 14 (60002) 27-10-11-11*

431432	DET. HOLDER MR20 SERIES	EA	1	10	00	
549642	FILTER, BANDPASS	EA	1	61.30	00	
590672	DET. SI VACTEC 21D459	EA	1	12.48	00	
560372	CABLE PVC 1 COND SHIELD 28 AWG	FT	3	1.08	00	
312430100	WIRE 24AWG BARE SOLID	EA	1	00	00	
430292	CONN. GASKET 2000 SERIES	EA	1	18	00	
<u>575892</u>	CONN. CIRC 3 RECEPT 10SL-3	EA	1	6.50	00	
490042	SPRING DETECTOR RETAINER MOD2	EA	1	35	00	
630092	FOLDING MIRROR SH MR0A SERIES	EA	1	10.42	00	
490032	SPRING FOLDING MIRROR MOD2	EA	1	1.85	00	
200204130	SCREW #2-56 X 1/8 BH SLOT	EA	1	00	00	
990100016	EPOXY HARDMAN #4001 3-5 MINS	EA	1	00	00	
3214600X0	TUBING #14 PVC CLEAR	EA	1	00	00	

576932
 490042
 630092
 490032
 200204130
 990100016
 3214600X0

omit

TOTAL	15	92.76	00	
PARTS COST		92.76		
PARTS LABOR		00		
ASSM LABOR		3.58		
TOTAL BOM		96.34		

57693-2

W.O.# 2545

BOM Number : DN#1943 - IRCON INFRARAIL IRT

SO-LI: 71258*1

Level	Part Number	Description	Quantity	UM	Alt.	MB X	ECO No.	ECO Date	StartUse	End Use.
1	DNODNE	DN PRICES	1.0000	EA		M P				
1	C11264	SENSING HEAD FINAL ASSEMB	1.0000	EA		M P				
2	451324	FIELD STOP .090DIA	1.0000	EA		B				
2	C11264/01	SEE EXTENDED DESCRIPTION	0.0000	EA		M				
2	990300005	RETAINING RING 7/16 OD, .2	1.0000	EA		B				
2	431442	DET. LOCATOR MOD2	1.0000	EA		B				
2	C11264/02	SEE EXTENDED DESCRIPTION	0.0000	EA		M				
2	C11209	SH DETECTOR ASSEMBLY (E-S	1.0000	EA		M P				
3	T-C11209-1	SELECT DET. ASSY. (E-SERI	0.0000	EA		B	3770	08-21-96		
2	447722	SENSOR E-HEAD, SPECIAL R7	1.0000	EA		B				
2	610432	EYE LENS FOR A HEAD	1.0000	EA		B				
2	990100004	EPOXY HB FULLER FE 7004	1.0000	EA		B				
2	451273	BIMETAL FLAG PAINTED A/OA	1.0000	EA		B				
2	447382	FIELD STOP, .437 DIA	1.0000	EA		B				
2	610412	LENS PLANO CONVEX 5" F/L	1.0000	EA		B				
2	431752	O RING 13/16 X 1/16 TH 70	1.0000	EA		B				
2	447362	LENS RING E-HEAD SENSOR	1.0000	EA		B				
2	200412440	SCREW #4-40 X 3/8 FIL SLO	4.0000	EA		B				
2	220403200	WASHER #4 LOCK SPLIT RING	4.0000	EA		B				
2	454152	SCREW, ADJUSTMENT,	1.0000	EA		B				
2	433372	O RING 3/32 X 7/32 X 1/16	1.0000	EA		B				
2	220602200	WASHER #6 LOCK EXT TOOTH	1.0000	EA		B				
2	200606040	SCREW #6-32 X 3/16 PH SLO	1.0000	EA		B				
2	C11264/03	SEE EXTENDED DESCRIPTION	0.0000	EA		M				
2	999900014	STEM BUMPER 3/8OD .275T	1.0000	EA		B				
2	477142	LABEL, SERIAL NUMBER, SEN	1.0000	EA		B				
2	474772	LABEL GROUND WARNING	1.0000	EA		B				
2	T-C11264-1	DETERMINE IF CABLE IS REQ	0.0000	EA		B				
2	C11264/04	SEE EXTENDED DESCRIPTION	0.0000	EA		M				
2	990100028	SEALANT RTV SILICONE BLAC	1.0000	EA		B				
2	999900013	CAP PLUG #SC-1-1/4	1.0000	EA		B				
1	D11198	PVC- (INT/EXT-E/F SERIES) (	1.0000	EA		M P				
2	560052	CABLE PVC 2 COND 1100/200	1.0000	FT		B	3913	04-02-97		
2	D11198/01	SEE EXTENDED DESCRIPTION	0.0000	EA		M				
2	D11198/02	SEE EXTENDED DESCRIPTION	0.0000	EA		M				
2	D11198/03	SEE EXTENDED DESCRIPTION	8.0000	EA		M				
2	575882	CONN. CIRC 10SL-3 BACKSHE	1.0000	EA		B	3913	04-02-97		
2	3210G00X0	TUBING #10 PVC CLEAR	3.0000	IN		B	3913	04-02-97		
2	3212G00X0	TUBING #12 PVC CLEAR	1.0000	IN		B	3913	04-02-97		
2	575902	CONN. CIRC 10SL-3 STR PLU	1.0000	EA		B	3913	04-02-97		
2	3216I1400	TUBING 1/4" SHRINKABLE BL	1.0000	IN		B	3913	04-02-97		
2	990100027	ADHESIVE LOCTITE 272	1.0000	EA		B	3913	04-02-97		
2	C-CABLE	DETERMINE CABLE LENGTH FR	1.0000	EA		M P	3913	04-02-97		
2	477202	LABEL INFRARAIL (2.0" X 0	1.0000	EA		B	3913	04-02-97		
1	U-D11198-C	12 FEET OF CABLE	1.0000	EA		M P				
2	560052	CABLE PVC 2 COND 1100/200	12.0000	FT		B				
1	U-M1-R712	MODULE ASSEMBLY - M1 - (I	1.0000	EA		M P				
2	103922011	RES. 39.2K OHM MF 1/4W 1%	1.0000	EA		B				
2	101872011	RES. 18.7K OHM MF 1/4W 1%	1.0000	EA		B				
2	101243011	RES. 124K OHM MF 1/4W 1%	2.0000	EA		B				
2	101302011	RES. 13.0K OHM MF 1/4W 1%	1.0000	EA		B				

FOR REFERENCE ONLY.

ORDER CHANGED TO
SENSING HEAD ONLY
SEE DN-HO#2020

BOM Number : DN#1943 - IRCON INFRARAIL IRT

SO-LI: 71258*1

Level	Part Number	Description	Quantity	UM	Alt	MB X	ECO No.	ECO Date	StartUse	End Use
2	105362011	RES. 53.6K OHM MF 1/4W 1%	1.0000	EA		B				
2	109531011	RES. 9.53K OHM MF 1/4W 1%	1.0000	EA		B				
2	108062011	RES. 80.6K OHM MF 1/4W 1%	1.0000	EA		B				
2	106491011	RES. 6.49K OHM MF 1/4W 1%	1.0000	EA		B				
2	104321011	RES. 4.32K OHM MF 1/4W 1%	1.0000	EA		B				
2	101913011	RES. 191K OHM MF 1/4W 1%	1.0000	EA		B				
2	102801011	RES. 2.80K OHM MF 1/4W 1%	1.0000	EA		B				
2	103093011	RES. 309K OHM MF 1/4W 1%	1.0000	EA		B				
2	101781011	RES. 1.78K OHM MF 1/4W 1%	1.0000	EA		B				
2	104993011	RES. 499K OHM MF 1/4W 1%	1.0000	EA		B				
2	101131011	RES. 1.13K OHM MF 1/4W 1%	1.0000	EA		B				
2	108253011	RES. 825K OHM MF 1/4W 1%	1.0000	EA		B				
2	106650011	RES. 665 OHM MF 1/4W 1%	1.0000	EA		B				
2	108870011	RES. 887 OHM MF 1/4W 1%	1.0000	EA		B				
2	101404011	RES. 1.40M OHM MF 1/4W 1%	1.0000	EA		B				
1	NLR712	NEW 'N'# FOR LR712	1.0000	EA		M P				
2	LR712	SH DET ASSY E-SENSOR SPL#	1.0000	EA		M P				
3	431432	DET. HOLDER MR20 SERIES	1.0000	EA		B				
3	590672	DET. SI VACTEC 21D459	1.0000	EA		B				
3	560372	CABLE PVC 1 COND SHIELD 2	3.0000	IN		B				
3	312430100	WIRE 24AWG BARE SOLID	1.0000	IN		B				
3	430292	CONN. GASKET 2000 SERIES	1.0000	EA		B				
3	576432	CONN. CIRC 3 RECPT. 10SL-	1.0000	EA		B				
3	490042	SPRING DETECTOR RETAINER	1.0000	EA		B				
3	630092	FOLDING MIRROR SH MROA SE	1.0000	EA		B				
3	490032	SPRING FOLDING MIRROR MOD	1.0000	EA		B				
3	200204130	SCREW #2-56 X 1/8 BH SLOT	1.0000	EA		B				
3	990100016	EPOXY HARDMAN #4001 3-5 M	1.0000	EA		B				
3	3214G00X0	TUBING #14 PVC CLEAR	1.0000	IN		B				
1	D11191	INFRARAIL BOX ASSEMBLY	1.0000	EA		M P				
2	433332	ENCLOSURE, DIN BOX, MODIF	1.0000	EA		B	3671	04-08-96		
2	C11187	POWER SUPPLY/ PEAK-PICKER	1.0000	EA		M P	3671	04-08-96		
3	C20212	SCHEMATIC: POWER SUPPLY/	1.0000	EA		M P	4202	01-14-99		
3	LDN200	PWR SUPPLY/ PP PCB ASSY	1.0000	EA		M P	4202	01-14-99		
4	502505	PCB DIN RAIL POWER PEAK-P	1.0000	EA		B	3769	08-05-96		
4	LDN200/01	SEE EXTENDED DESCRIPTION	0.0000	EA		M P				
4	533082	TRAN. MJE800 NPN - DARLIN	1.0000	EA		B	3769	08-05-96		
4	LDN200/02	SEE EXTENDED DESCRIPTION	0.0000	EA		M P				
4	LDN200/03	SEE EXTENDED DESCRIPTION	0.0000	EA		M P				
4	530882	DIODE 1N4002 GP RECTIFIER	1.0000	EA		B	3769	08-05-96		
4	532952	OP-AMP OP80GP ULTRA LOW B	2.0000	EA		B	3769	08-05-96		
4	532322	IC 4053B ANALOG MUX/DEMUX	1.0000	EA		B	3769	08-05-96		
4	531862	OP-AMP LM346N PROGRAM QUA	1.0000	EA		B	3769	08-05-96		
4	102493011	RES. 249K OHM MF 1/4W 1%	1.0000	EA		B	3769	08-05-96		
4	103321011	RES. 3.32K OHM MF 1/4W 1%	1.0000	EA		B	3769	08-05-96		
4	101820011	RES. 182 OHM MF 1/4W 1%	1.0000	EA		B	3769	08-05-96		
4	104421011	RES. 4.42K OHM MF 1/4W 1%	1.0000	EA		B	3769	08-05-96		
4	106654011	RES. 6.65M OHM MF 1/4W 1%	1.0000	EA		B	3769	08-05-96		
4	104993011	RES. 499K OHM MF 1/4W 1%	1.0000	EA		B	3769	08-05-96		
4	104021011	RES. 4.02K OHM MF 1/4W 1%	1.0000	EA		B	3769	08-05-96		
4	105364011	RES. 5.36M OHM MF 1/4W 1%	2.0000	EA		B	3769	08-05-96		

BOM Number : DN#1943 - IRCON INFRARAIL IRT

SO-LI: 71258*1

Level	Part Number	Description	Quantity	UM	Alt	MB X	ECO No.	ECO Date	StartUse	End Use
4	103480011	RES. 348 OHM MF 1/4W 1%	1.0000	EA		B	3769	08-05-96		
4	100000990	JUMPER DUMMY RESISTOR	4.0000	EA		B	3769	08-05-96		
4	101000011	RES. 100 OHM MF 1/4W 1%	1.0000	EA		B	3769	08-05-96		
4	101003011	RES. 100K OHM MF 1/4W 1%	1.0000	EA		B	3769	08-05-96		
4	101004011	RES. 1.00M OHM MF 1/4W 1%	4.0000	EA		B	3769	08-05-96		
4	102001011	RES. 2.00K OHM MF 1/4W 1%	1.0000	EA		B	3769	08-05-96		
4	102003011	RES. 200K OHM MF 1/4W 1%	2.0000	EA		B	3769	08-05-96		
4	104991011	RES. 4.99K OHM MF 1/4W 1%	1.0000	EA		B	3769	08-05-96		
4	530572	DIODE 1N4446 SWITCHING	2.0000	EA		B	3769	08-05-96		
4	530532	DIODE FD300 GENERAL PURPO	1.0000	EA		B	3769	08-05-96		
4	521852	CAP. 0.68 MFD 50V CERAMIC	1.0000	EA		B	3769	08-05-96		
4	521972	CAP. .047 MFD 50V CER X7	1.0000	EA		B	3769	08-05-96		
4	521072	CAP. 22MFD 16V TANT 10%	2.0000	EA		B	3769	08-05-96		
4	551122	CHOKER 9250-122 1.2 UH, .1	2.0000	EA		B	3769	08-05-96		
4	521902	CAP. NPO 1000pf 200V .2LS	1.0000	EA		B	3769	08-05-96		
4	521862	CAP. 3.3 MFD 50V CERAMC X	1.0000	EA		B	3769	08-05-96		
4	521872	CAP. 1.0 MFD 50V CERAMIC	5.0000	EA		B	3769	08-05-96		
4	522002	CAP. .01 MFD 200V CERAMIC	6.0000	EA		B	3769	08-05-96		
4	531892	REG. LM317LZ +1.2/37V ADJ	1.0000	EA		B	3769	08-05-96		
4	431902	BIVAR PERMO PAD 0.250 DIA	1.0000	EA		B	3769	08-05-96		
4	530862	TRAN. 2N2222A NPN MED POW	1.0000	EA		B	3769	08-05-96		
4	551152	INDUCTOR 100UH +/-10% IMS	2.0000	EA		B	3769	08-05-96		
4	531882	DIODE LM385BZ-2.5 2.5V RE	6.0000	EA		B	3769	08-05-96		
4	575602	CONN. HDR AMP STRAIGHT 5	1.0000	EA		B	3769	08-05-96		
4	574592	CONN. HDR AMP STRAIGHT 4	1.0000	EA		B	3769	08-05-96		
4	LDN200/04	SEE EXTENDED DESCRIPTION	0.0000	EA		M P				
4	572732	HEADER SNGL 36 PIN .1 CNT	11.0000	EA		B	3769	08-05-96		
4	LDN200/05	SEE EXTENDED DESCRIPTION	0.0000	EA		M P				
2	C11186	PREAMP/ LINEARIZER PCB AS	1.0000	EA		M P	3671	04-08-96		
3	C20211	SCHEMATIC: PREAMP/ LINEAR	1.0000	EA		M P	3659	04-12-96		
3	LDN100	PREAMP/ LIN PCB ASSY INFR	1.0000	EA		M P	3659	04-12-96		
4	502493	PCB DIN RAIL LINEARIZER	1.0000	EA		B	3767	08-07-96		
4	LDN100/01	SEE EXTENDED DESCRIPTION	0.0000	EA		M P				
4	LDN100/02	SEE EXTENDED DESCRIPTION	0.0000	EA		M P				
4	532982	OP-AMP AD548CQ LOW PWR BI	1.0000	EA		B	3767	08-07-96		
4	531862	OP-AMP LM346N PROGRAM QUA	2.0000	EA		B	3767	08-07-96		
4	532992	OP-AMP OP490EY LOW VOLT Q	1.0000	EA		B	3767	08-07-96		
4	530532	DIODE FD300 GENERAL PURPO	16.0000	EA		B	3767	08-07-96		
4	514632	RES. 330K NETWORK 10 PIN	2.0000	EA		B	3767	08-07-96		
4	514642	RES. 330K NETWORK 10 PIN	2.0000	EA		B	3767	08-07-96		
4	104533011	RES. 453K OHM MF 1/4W 1%	1.0000	EA		B	3767	08-07-96		
4	1010R0011	RES. 10.0 OHM MF 1/4W 1%	1.0000	EA		B	3767	08-07-96		
4	102743011	RES. 274K OHM MF 1/4W 1%	1.0000	EA		B	3767	08-07-96		
4	102103011	RES. 210K OHM MF 1/4W 1%	1.0000	EA		B	3767	08-07-96		
4	105364011	RES. 5.36M OHM MF 1/4W 1%	4.0000	EA		B	3767	08-07-96		
4	101002011	RES. 10.0K OHM MF 1/4W 1%	1.0000	EA		B	3767	08-07-96		
4	101003011	RES. 100K OHM MF 1/4W 1%	1.0000	EA		B	3767	08-07-96		
4	102003011	RES. 200K OHM MF 1/4W 1%	2.0000	EA		B	3767	08-07-96		
4	101000011	RES. 100 OHM MF 1/4W 1%	2.0000	EA		B	3767	08-07-96		
4	100000990	JUMPER DUMMY RESISTOR	1.0000	EA		B	3767	08-07-96		
4	551122	CHOKER 9250-122 1.2 UH, .1	1.0000	EA		B	3767	08-07-96		

BOM Number : DN#1943 - IRCON INFRARAIL IRT

SO-LI: 71258*1

Level	Part Number	Description	Quantity	UM	Alt	MB X	ECO No.	ECO Date	StartUse	End Use.
4	540412	FERRITE BEAD ON LEAD AXIA	3.0000	EA		B	3767		08-07-96	
4	522002	CAP. .01 MFD 200V CERAMIC	7.0000	EA		B	3767		08-07-96	
4	521902	CAP. NPO 1000pf 200V .2LS	2.0000	EA		B	3767		08-07-96	
4	521932	CAP. 100 PF COG 200V	1.0000	EA		B	3767		08-07-96	
4	521962	CAP. NPO 10pf 200V .2LS	2.0000	EA		B	3767		08-07-96	
4	514612	POT. 50K 25T 1/2W 10%	1.0000	EA		B	3767		08-07-96	
4	514242	POT. 25K OHM 25T 1/2W 10%	1.0000	EA		B	3767		08-07-96	
4	514622	POT. 100K 25T 1/2W 10%	1.0000	EA		B	3767		08-07-96	
4	574922	CONN. HDR AMP STRAIGHT 3	1.0000	EA		B	3767		08-07-96	
4	LDN100/03	SEE EXTENDED DESCRIPTION	0.0000	EA		M P				
4	574432	SOCKET 40 POS DIP .5HT EL	1.0000	EA		B	3767		08-07-96	
4	LDN100/04	SEE EXTENDED DESCRIPTION	0.0000	EA		M P				
4	526002	CAP. SMC 330PF NPO 50V 5%	1.0000	EA		B	3767		08-07-96	
4	572732	HEADER SNGL 36 PIN .1 CNT	11.0000	EA		B	3767		08-07-96	
4	LDN100/05	SEE EXTENDED DESCRIPTION	0.0000	EA		M P				
2	C11193	PCB INTERCONNECT ASSEMBLY	1.0000	EA		M P	3671		04-08-96	
3	LDN300	PCB INTERCONN ASSY (INFRA	1.0000	EA		M P				
4	502533	PCB DIN RAIL POWER PEAK-P	1.0000	EA		B	3721		08-01-96	
4	575922	CONN. FEMALE 11 POSITION	2.0000	EA		B	3721		08-01-96	
2	477112	LABEL, COVER, DIN BOX	1.0000	EA		B	3671		04-08-96	
2	C11190	DECAY RATE POT/ CONNECTOR	1.0000	EA		M P	3671		04-08-96	
3	LDN003	DECAY RATE POT/ CONN. ASS	1.0000	EA		M P	4030		10-08-97	
4	514592	POT. 50K OHM 1T 1/2W 10%	1.0000	EA		B				
4	LDN003/01	SEE EXTENDED DESCRIPTION	0.0000	EA		M P				
4	302479000	WIRE 24AWG VIO/WHITE STRA	1.0000	IN		B				
4	302409000	WIRE 24AWG BLK/WHITE STRA	1.0000	IN		B				
4	302459000	WIRE 24AWG GRN/WHITE STRA	1.0000	IN		B				
4	574662	CONN. CONTACT 20-24 AWG C	3.0000	EA		B				
4	574692	CONN. HOUSING 5 POSITION-	1.0000	EA		B				
2	C11189	RESPONSE TIME POT/ CONN-	1.0000	EA		M P	3671		04-08-96	
3	LDN002	RESP. TIME POT/ CONN. ASS	1.0000	EA		M P				
4	514602	POT. 5M OHM 1T 1/2W 10% P	1.0000	EA		B				
4	302440000	WIRE 24AWG YEL/BLACK STRA	1.0000	IN		B				
4	302460000	WIRE 24AWG BLU/BLACK STRA	1.0000	IN		B				
4	302430000	WIRE 24AWG ORG/BLACK STRA	1.0000	IN		B				
4	574662	CONN. CONTACT 20-24 AWG C	3.0000	EA		B				
4	574682	CONN. HOUSING 4 POSITION-	1.0000	EA		B				
2	C11188	EMISSIVITY POT/ CONNECTOR	1.0000	EA		M P	3671		04-08-96	
3	LDN001	EMISSIVITY POT/ CONN. ASS	1.0000	EA		M P	3767		08-07-96	
4	513722	POT. 100K 2 DIGIT 1% DIGI	1.0000	EA		B	3767		08-07-96	
4	30245X000	WIRE 24AWG GREEN STRANDED	1.0000	IN		B	3767		08-07-96	
4	30249X000	WIRE 24AWG WHITE STRANDED	1.0000	IN		B	3767		08-07-96	
4	30246X000	WIRE 24AWG BLUE STRANDED	1.0000	IN		B	3767		08-07-96	
4	574662	CONN. CONTACT 20-24 AWG C	3.0000	EA		B	3767		08-07-96	
4	574672	CONN. HOUSING 3 POSITION-	1.0000	EA		B	3767		08-07-96	
4	477212	LABEL - CLEAR WINDOW	1.0000	EA		B	3767		08-07-96	
2	575852	KNOB, 9MM COLLET TYPE,	2.0000	EA		B	3671		04-08-96	
2	575872	POINTER, 9MM COLLET TYPE	2.0000	EA		B	3671		04-08-96	
2	575862	CAP. 9MM COLLET TYPE KNOB	2.0000	EA		B	3671		04-08-96	
2	C11194	MODULE ASSEMBLY - M1 - (I	1.0000	EA		M P	3671		04-08-96	
3	573912	HEADER 40 PIN DIP .6 CENT	1.0000	EA		B				

BOM Number : DN#1943 - IRCON INFRARAIL IRT

SO-LI: 71258*1

.....Level.....	..Part Number..	.....Description.....	.Quantity.	.UM.	Alt.	MB X	.ECO No.	ECO Date	StartUse	End Use.
				UM						
3	T-C11194-1	SELECT "M1" MODULE VALUES	0.0000	EA		B				
3	T-C11194-3	GT M1 MODULE VALUES	0.0000	EA		B				
2	575912	CONN. KEYING ELEMENT (DN-	2.0000	EA		B	3671	04-08-96		
2	477132	LABEL, SERIAL NUMBER, DIN	1.0000	EA		B	3671	04-08-96		
2	477122	LABEL, DIN BOX, INFRARAIL	1.0000	EA		B	3671	04-08-96		
2	574082	TERM. BLOCK JUMPER QUICK	1.0000	EA		B	3671	04-08-96		
2	LDNKIT	MTG CLIP KIT FOR INFRARAI	1.0000	EA		M P	3671	04-08-96		
3	990300010	CLIP MTG FOR DIN BOX	2.0000	EA		B	3694	04-17-96		
3	LDNKIT/01	SEE EXTENDED DESCRIPTION	0.0000	EA		M P				
2	477182	LABEL-CE MARK (PRODUCTS)	1.0000	EA		B	3671	04-08-96		



Quote

PURCHASE REQUISITION

Supplier

Date 11-5-99

Fox Tool

P.O. # _____

check with MPF

Requisitioner _____

& UNIVERSAL ASO

Purpose/Reason _____

Attn _____

Date needed _____

Phone _____

Route to _____

Material Safety Data Information:
 New chemical MSDS received on _____ for sample only routine use
 Previously purchased chemical: Active Index No. _____

Qty	U/M	Part No.	Rev. Level	Description	Price Ea	Total	Acct / Work Order No.
10				E-HEAD SENSOR			
25				1-11 1/2 NPT			
50							
100				please quote			
				Qty's 10, 25, 50, 100			
				LAST PURCHASED			
				4-17-97 @ \$64.90			
				QTY 125 (PO # 82679-00)			

Confirming to _____

Approval (under \$100 - Authorized Requisitioner) _____

Total \$ _____

(\$100 - \$5000 - Department Manager) _____

(over \$5000 - General Manager) _____

Purchase Order

Joe L. Atkinson

~~ATTN: TED~~



IRCON, INC.
7300 N. Natchez Ave.
Niles, IL 60714 USA

Phone 847-967-5151
Fax 847-647-0070



001606/773-235-5283

ONUMBER	PAGE	P/O DATE	ORDER TYPE	CHANGE/CANCEL
82674-00	01	04/17/97	NORMAL	ORIGINAL 04/17/97

ORDERED FROM
FOX TOOL CO.
1665 N. MILWAUKEE AVENUE
CHICAGO IL 60647

SHIP TO
IRCON, INC.
7300 N. NATCHEZ AVE.
NILES, IL 60714

BUYER	TERMS	ACKNOWLEDGE	CONFIRM	FOB	SHIP VIA	COL/PPD
ON DEFOE, P/MGR.	NET 45	YES	YES	SHIPPING PT.	BEST WAY	PPD

LINE NO.	QTY. ORDERED	BLANKET TYPE	U/M	OUR ITEM NUMBER DESCRIPTION/COMMENTS	YOUR ITEM NUMBER	PRICE/UNIT REQUESTED DATE	EXTENDED PRICE	CHANGE CANCEL
1	125		EA	447722 SENSOR E-HEAD, SPECIAL R712 (1-11 1/2 NPT) COMPLETE PER PRINT		64.900 05/30/97	8,112.50	

ILLINOIS PERMIT #2415-9425

TOTAL EXTENDED PRICE 8,112.50

FOR RESALE

COMMENTS

ATN TED/FAX 4-17 Q#816

FOR RESALE

PURCHASE ORDER NUMBER AND IRCON PART NUMBER, (IF STATED) MUST APPEAR ON ALL ACKNOWLEDGMENTS, PACKING SLIPS AND INVOICES.

THIS ORDER MUST BE ACKNOWLEDGED WITHIN 7 DAYS.
THIS ORDER ACCEPTED SUBJECT TO TERMS AND CONDITIONS SHOWN ON THIS AND THE REVERSE SIDE.

INTERNAL USE

ORDERED BY

Part No. 020192 Rev H 10/96

[Signature]

CUSTOMER

**DRAWING (S) TOO LARGE
TO SCAN.**

**TO VIEW THE ORIGINAL
DESIGN,**

**A REQUEST TO VIEW
PHYSICAL FILE
IS YOUR NEXT OPTION.**

U712
S/O 80059

Section 1 — GENERAL INFORMATION

1.5 PRODUCT MODIFICATION

IRCON SA Series Model 16-99CF9-0-0-2 is modified according to customer request to have a special temperature range of 500 to 2000°C; a standard optical resolution of D/60; and a special 20 ft long fiber optic cable.

Restriction:

Accuracy of the instrument is degraded to 1.000% of full scale.

This instrument is suitable for use with all standard SA options and accessories.

Details of this modification are retained in IRCON Engineering Files as SA Series Special No. U712.

NOTE: IRCON, Inc. is the sole owner in all respects of any product or software modification or design herein specified.