

DATE: 05-22-2001
REVISION: B
W.O. No.: 64730
CUSTOMER: SINTRIS
LOCATION: PIACENZA
LOCATION: ITALY

INFRARAIL SPECIAL NUMBER R715

PURPOSE AND DESCRIPTION:

CUSTOMER REQUIRES A SPECIAL TEMPERATURE RANGE INFRARAIL DNE SYSTEM WITH SPECIAL D/50 OPTICAL RESOLUTION AND 1.6 MICRON SPECTRUM. THE INSTRUMENT ALSO HAS 5" FOCAL LENGTH.

MODEL: DNE99-99C
RANGE: 400 - 900 DEG. C
OPTICAL RESOLUTION: D/50 WITH 5-INCH FOCAL DISTANCE
WAVELENGTH: 1.49 - 1.6 um

GENERALITY OF APPLICATION AND RESTRICTRIONS:

RESTRICTIONS:

CALIBRATION ACCURACY FOR THIS INSTRUMENT IS 1% OF FULL SCALE.

UNRESTRICTED, SUITABLE FOR USE WITH ALL STANDARD OPTIONS.

WRITTEN BY: _____

Ami DONADO

AMI DONADO

APPROVED BY: _____

Ami DONADO

DATE: _____

5-22-2001

INFRARAIL SPECIAL NUMBER R715 CONTINUED,

PRODUCTION INSTRUCTIONS:

FOR THE ELECTRONICS MODULE, BUILD THE M1 MODULE PER BILL OF MATERIAL ON PAGE 3.

FOR THE SENSING HEAD, START WITH A MODEL DNE31-50C SENSOR AND MAKE THE FOLLOWING CHANGES:

DETECTOR ASSEMBLY CHANGES: (REF. ASSY. # C11209).

1. INSTALL InGaAs DETECTOR P.N. 59094-2 IN LIEU OF THE STANDARD SILICON DETECTOR.
2. WIRE THE DETECTOR PER DETAIL A OF DRAWING No. C-11207.
3. INSTALL FILTER PART NUMBER 64055-2 (1.49 - 1.60 μm).

SENSING HEAD ASSEMBLY CHANGES: (REF. ASSY. # C11201).

1. INSTALL DETECTOR FIELD STOP PART NUMBER 451323 (.044" ID) IN PLACE OF ITEM 1 P.N. 451322.
2. INSTALL LENS PART NUMBER 610412 (5" FOCAL LENGTH).

CALIBRATION INSTRUCTIONS:

PRE-CAL: CALIBRATE THE ELECTRONIC MODULE PER STANDARD PROCEDURE. LINEARIZER ACCURACY IS 0.5% OF FULL SCALE.

$$I_{scFS} = 5.699 \text{ Ua}$$

$$I_{scZS} = 0.0159 \text{ Ua}$$

FINAL-CAL: SET I_{scFS} HEAD OUTPUT TO 5.699 MICROAMPS.
CHECK FOR BEST CALIBRATION ACCURACY AT 700 DEG. C. ACCURACY IS 1% OF FULL SCALE.
FOLLOW OUTPUT TABLE ON PAGE 4 ATTACHED.

MANUAL INSTRUCTIONS:

GENERIC INFRARAIL SERIES MANUAL.

INCLUDE THE RESTRICTIONS LISTED ON PAGE 1 OF THESE DETAIL SHEETS.

INFRARAIL SPECIAL NUMBER R715 CONTINUED,

BILL OF MATERIAL

MODULE M1 REFERENCE: DWG.NO.C11194

SYMBOL	PART NO.	DESCRIPTION		
R1	105623011	RESISTOR	562 Kohm	METAL FILM 1/4W 1%
R44	101872011	RESISTOR	18.7 Kohm	METAL FILM 1/4W 1%
R54	101183011	RESISTOR	118 Kohm	METAL FILM 1/4W 1%
R45	101502011	RESISTOR	15.0 Kohm	METAL FILM 1/4W 1%
R55	105902011	RESISTOR	59.0 Kohm	METAL FILM 1/4W 1%
R46	101022011	RESISTOR	10.2 Kohm	METAL FILM 1/4W 1%
R56	109762011	RESISTOR	97.6 Kohm	METAL FILM 1/4W 1%
R47	106341011	RESISTOR	6.34 Kohm	METAL FILM 1/4W 1%
R57	101653011	RESISTOR	165 Kohm	METAL FILM 1/4W 1%
R48	103831011	RESISTOR	3.83 Kohm	METAL FILM 1/4W 1%
R58	102873011	RESISTOR	287 Kohm	METAL FILM 1/4W 1%
R49	102151011	RESISTOR	2.15 Kohm	METAL FILM 1/4W 1%
R59	105233011	RESISTOR	523 Kohm	METAL FILM 1/4W 1%
R50	101181011	RESISTOR	1.18 Kohm	METAL FILM 1/4W 1%
R60	109763011	RESISTOR	976 Kohm	METAL FILM 1/4W 1%
R51	106190011	RESISTOR	619 ohm	METAL FILM 1/4W 1%
R61	101914011	RESISTOR	1.91 Mohm	METAL FILM 1/4W 1%
R52	103160011	RESISTOR	316 ohm	METAL FILM 1/4W 1%
R53	102670011	RESISTOR	267 ohm	METAL FILM 1/4W 1%
R62	103924011	RESISTOR	3.92 Mohm	METAL FILM 1/4W 1%

INFRARAIL SPECIAL NUMBER R715
TEMPERATURE RANGE: 400 TO 900 DEGREES C
SPECTRUM: 1.49 TO 1.60 MICRONS

TEMPERATURE DEGREES C	SENSOR OUTPUT IN μ AMPS	INDICATOR OUTPUT mAMPS
400.0	0.0159	4.000
425.0	0.0260	4.800
450.0	0.0411	5.600
475.0	0.0632	6.400
500.0	0.0944	7.200
525.0	0.1376	8.000
550.0	0.1959	8.800
575.0	0.2732	9.600
600.0	0.3739	10.400
625.0	0.5029	11.200
650.0	0.6656	12.000
675.0	0.8681	12.800
700.0	1.1168	13.600
725.0	1.4188	14.400
750.0	1.7816	15.200
775.0	2.2130	16.000
800.0	2.7213	16.800
825.0	3.3151	17.600
850.0	4.0033	18.400
875.0	4.7948	19.200
900.0	5.6990	20.000

SEE REV. B

AD. 5-22-01

PAGE 1 OF 4
DATE: 12-04-1997
REVISION: A
W.O. NO: 64730
CUSTOMER: SINTRIS
LOCATION: ITALY

INFRARAIL SPECIAL NUMBER R715

PURPOSE AND DESCRIPTION:

CUSTOMER REQUIRES A INFRARAIL TEMPERATURE SYSTEM WITH A SPECIAL TEMPERATURE RANGE AND OPTICAL RESOLUTION AS FOLLOWS :

MODEL: DNE99-99C
RANGE: 400 - 900 DEG. C
OPTICAL RESOLUTION: D/50 (5 INCH FOCAL DISTANCE SPECIAL)

GENERILITY OF APPLICATION AND RESTRICTIONS:

RESTRICTIONS: CALIBRATION ACCURACY FOR THIS SPECIAL TEMPERATURE RANGE AND WAVELENGTH IS REDUCED TO 1% OF FULL SCALE TEMPERATURE.

UNRESTRICTED: SUITABLE FOR USE WITH ALL STANDARD OPTIONS.

WRITTEN BY:

J. Loh

APPROVED BY:

J. Loh

DATE:

12-4-97

INFRARAIL SPECIAL NUMBER R715

REVISION: A
DATE: 12-04-1997

PRODUCTION INSTRUCTIONS:

START WITH A MODEL DNE31-50C ELECTRONICS MODULE, AND INSTALL M1 MODULE AS PER BILL OF MATERIAL ON PAGE 3.

FOR THE SENSING HEAD, START WITH A MODEL DNE31-50C SENSOR AND MAKE THE FOLLOWING CHANGES:

DETECTOR ASSEMBLY (C11209) CHANGES:

1. FOR THE DETECTOR , USE DETECTOR 590792 (InGaAs) IN PLACE OF SILICON DETECTOR.
2. WIRE THE DETECTOR PER **DETAIL A** OF DRAWING C-11207.
3. FOR THE FILTER USE P.N. 64055-2 (1.49 - 1.6 um).
4. FOR THE FIELD STOP, USE P.N. 45132-3 (0.044" DIAMETER)

SENSING HEAD (C11201) CHANGES:

1. FOR THE LENS, USE P.N. 61041-2 (5" FOCAL DISTANCE).

CALIBRATION INSTRUCTIONS:

NOTE :
CHECK FOR BEST CALIBRATION ACCURACY AT 700°C. ACCURACY IS 1.0% FOR THIS UNIT,
AND 0.5% FOR THE LINEARIZER.

CALIBRATE AS PER STANDARD.
SET I_{sc} HEAD OUT @ T_{bb} (900°C) = 5.699 uA.

MANUAL INSTRUCTIONS:

GENERIC INFRARAIL SERIES MANUAL.

INFRARAIL SPECIAL NUMBER R715
TEMPERATURE RANGE: 400 TO 900 DEGREES C
SPECTRUM: 1.49 TO 1.60 MICRONS

TEMPERATURE DEGREES C	SENSOR OUTPUT IN uAMPS	INDICATOR OUTPUT mAMPS
400.0	0.0159	4.000
425.0	0.0260	4.800
450.0	0.0411	5.600
475.0	0.0632	6.400
500.0	0.0944	7.200
525.0	0.1376	8.000
550.0	0.1959	8.800
575.0	0.2732	9.600
600.0	0.3739	10.400
625.0	0.5029	11.200
650.0	0.6656	12.000
675.0	0.8681	12.800
700.0	1.1168	13.600
725.0	1.4188	14.400
750.0	1.7816	15.200
775.0	2.2130	16.000
800.0	2.7213	16.800
825.0	3.3151	17.600
850.0	4.0033	18.400
875.0	4.7948	19.200
900.0	5.6990	20.000

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 01/10/98

OUR ORDER NO. ORDER DATE MONTH/DAY/YEAR
SA 064730/00 11/24/97

YOUR ORDER NO.
DMP/97/032060

TERMS NET 30
X OTHER TELEX TRANSFER

F.O.B. NILES, ILLINOIS
X

CODE 716 .00

VIA MSAS PPD. COLL. X

SPECIAL SHIPPING INSTRUCTIONS

SOLD TO CUSTOMER NO. 004953

SINTRIS MACCHINE S.R.L.
VIA CASSOLI, 7
29100 PIACENZA
ITALY

SHIPPING ADDRESS TAX CODE
NO TAX

SINTRIS MACCHINE S.R.L.
VIA CASSOLI, 7
29100 PIACENZA
ITALY

1/26/97

PAGE 1

LINE NO.	PART NO.	QTY.	DESCRIPTION	UNIT MEAS	DISCOUNT %	PRICE EACH U.S. DOLLAR	AMOUNT U.S. DOLLAR
01		1	INFRARAIL TEMPERATURE SYSTEM MODEL DNE99-99C SERIAL NBR 002089 CABLE(S) 12 FEET EA (12 FEET EA INCLUDED IN ABOVE) ***** * SPECIAL Z999 * ***** !!!!!!!!!!WARNING!!!!!!!!!!!! ** SPL # TO BE DETERMINED ** ** SEE ENGINEERING DEPT. ** SUB TOTALS GRAND TOTAL	EA		1554.00	1554.00
							1554.00
							1554.00

New Special Temp range of 400-900C, P/Sures. with ENGATS Det with 5" focus RAB 12/3

JECT TO TERMS AND CONDITIONS SHOWN ON THIS AND THE REVERSE SIDE

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

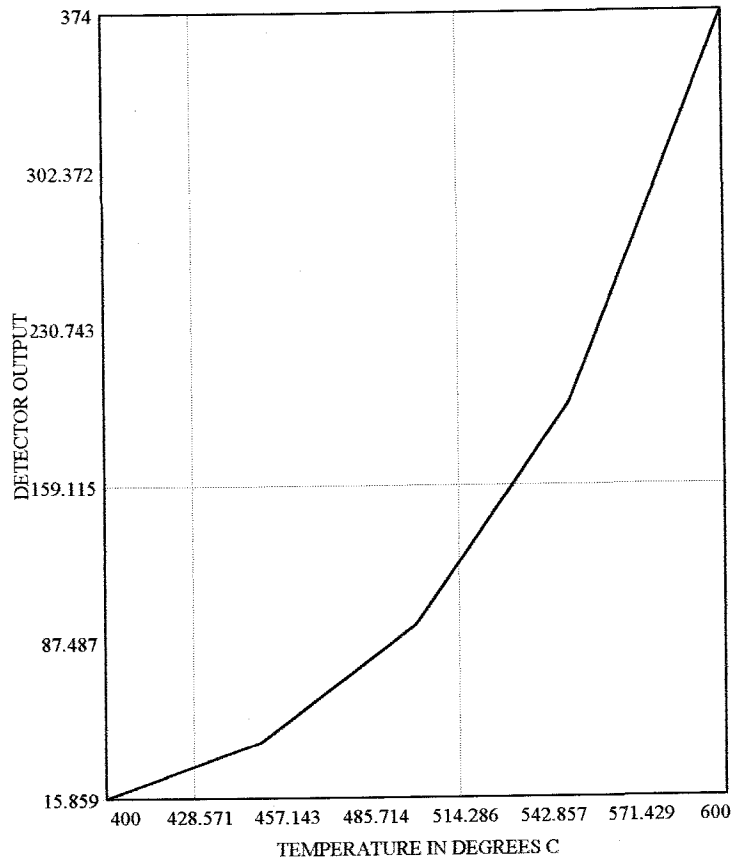
AVE.
14 USA

ORIGINAL

Part No. 020172 Rev C 12/95

TC OUTPUT(TC)

600	374
550	195.931328
500	94.430553
450	41.153206
400	15.858535



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TEMPERATURE RANGE: 400 TO 900 DEGREES C
SPECTRUM: 1.49 TO 1.60 MICRONS

TEMPERATURE DEGREES C	SENSOR OUTPUT IN nAMPS	INDICATOR OUTPUT mAMPS
400.0	15.8592	4.000
425.0	25.9861	4.800
450.0	41.1540	5.600
475.0	63.2083	6.400
500.0	94.4310	7.200
525.0	137.5817	8.000
550.0	195.9309	8.800
575.0	273.2845	9.600
600.0	373.9996	10.400
625.0	502.9900	11.200
650.0	665.7228	12.000
675.0	868.2059	12.800
700.0	1116.9658	13.600
725.0	1419.0215	14.400
750.0	1781.8436	15.200
775.0	2213.3235	16.000
800.0	2721.7178	16.800
825.0	3315.6060	17.600
850.0	4003.8403	18.400
875.0	4795.4922	19.200
900.0	5699.7998	20.000