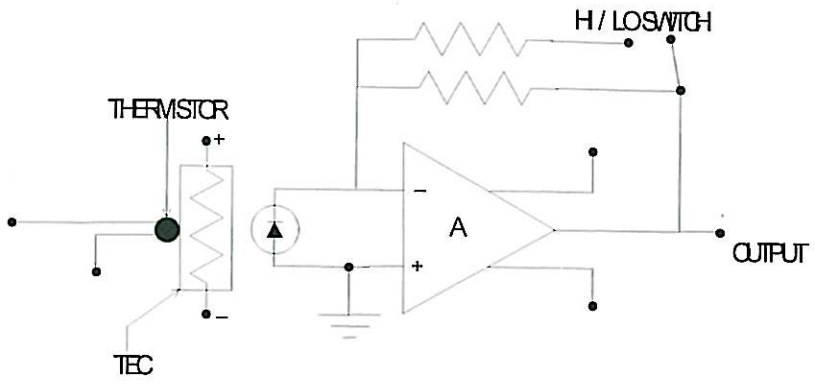
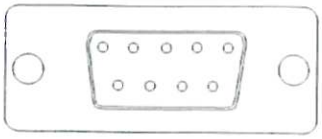
HORIBA JOBIN YVON

DSS - SERIES PHOTODIODE / RECEIVER

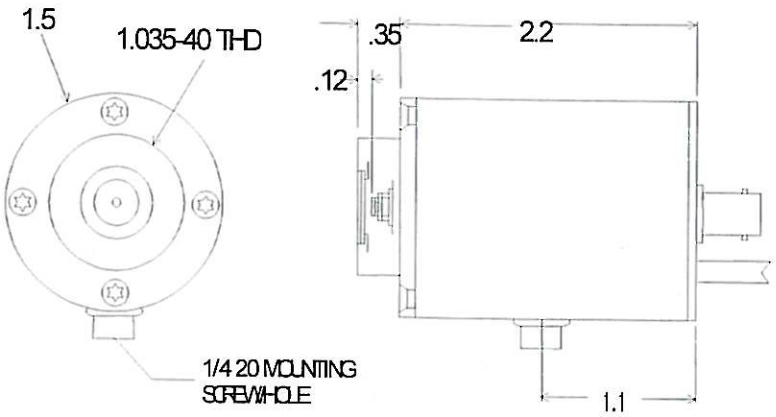


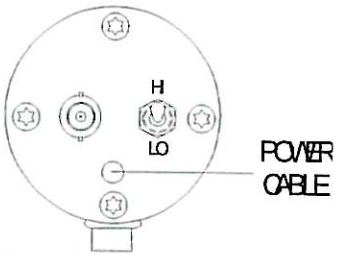
Part No:
DSS-IGA1.9030TC



DB-9 PIN OUT

1	COOLER (+)	6	+V
2	COOLER (-)	7	-V
3	THERMISTOR	8	GND
4	THERMISTOR	9	CASE
5	NO CONNECT		



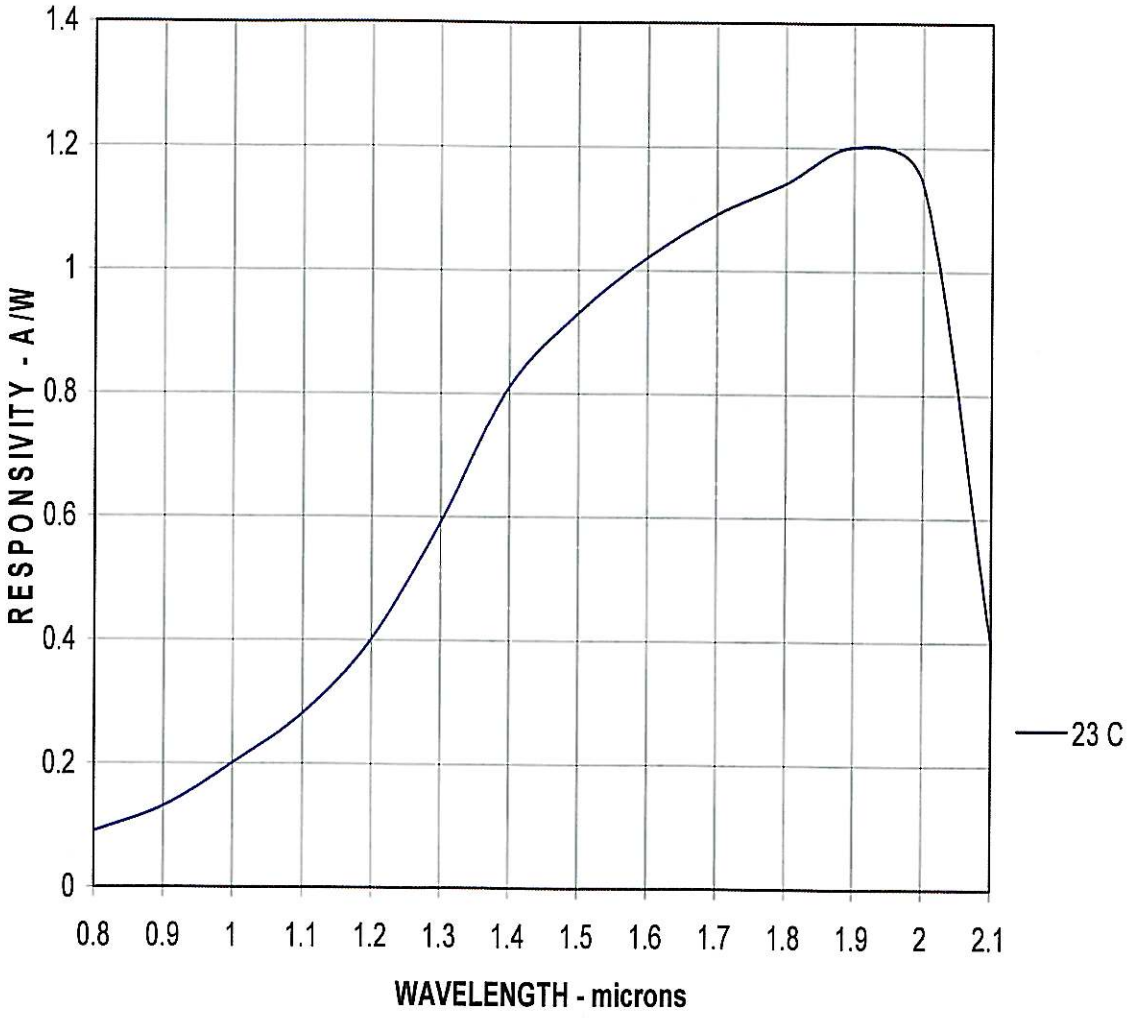


Application Note This unit is a high performance photodiode/receiver operated with a thermoelectric cooler for stabilization/cooling with a dual gain FET input transimpedence amplifier. The output voltage is proportional to the input signal current: $V_{out} = I_{signal} \cdot R_f$. The PD/AMP is a DC coupled dual gain system. Care should be taken in shielding the unit from stray lightduring operation to prevent saturation of the amplifier (and potential failure).

SPECIFICATIONS		
Detector Type	**3 mm ex-InGaAs Photodiode**	
Operating Temperature - °C	**25 @ I_{tec} = 0.0 A**	**-30 @ I_{tec} = 0.6 A**
Operating Wavelength - µm	**1.0 – 2.1**	**1.0 – 2.1**
Responsivity - V/W @ pk	**1.2×10^7 / 10^6**	**1.2×10^7 / 10^6**
Noise - V/Hz$^{1/2}$ @ 100 Hz	**1.8×10^{-5} / 10^{-6}**	**4.0×10^{-6} / 10^{-7}**
NEP - W/Hz$^{1/2}$ @ 1.95 µm	**< 1.5×10^{-12}**	**< 3×10^{-13}**
Bandwidth (-3dB) - Hz	**DC – 2k**	**DC – 2k**
Power Requirements	**+/- 9 VDC to +/- 15 VDC**	
Connections	**BNC signal output. Shielded power cable terminated with a DB-9 connector directly couples the unit with the PS/TC -1 Low Noise Power Supply.**	

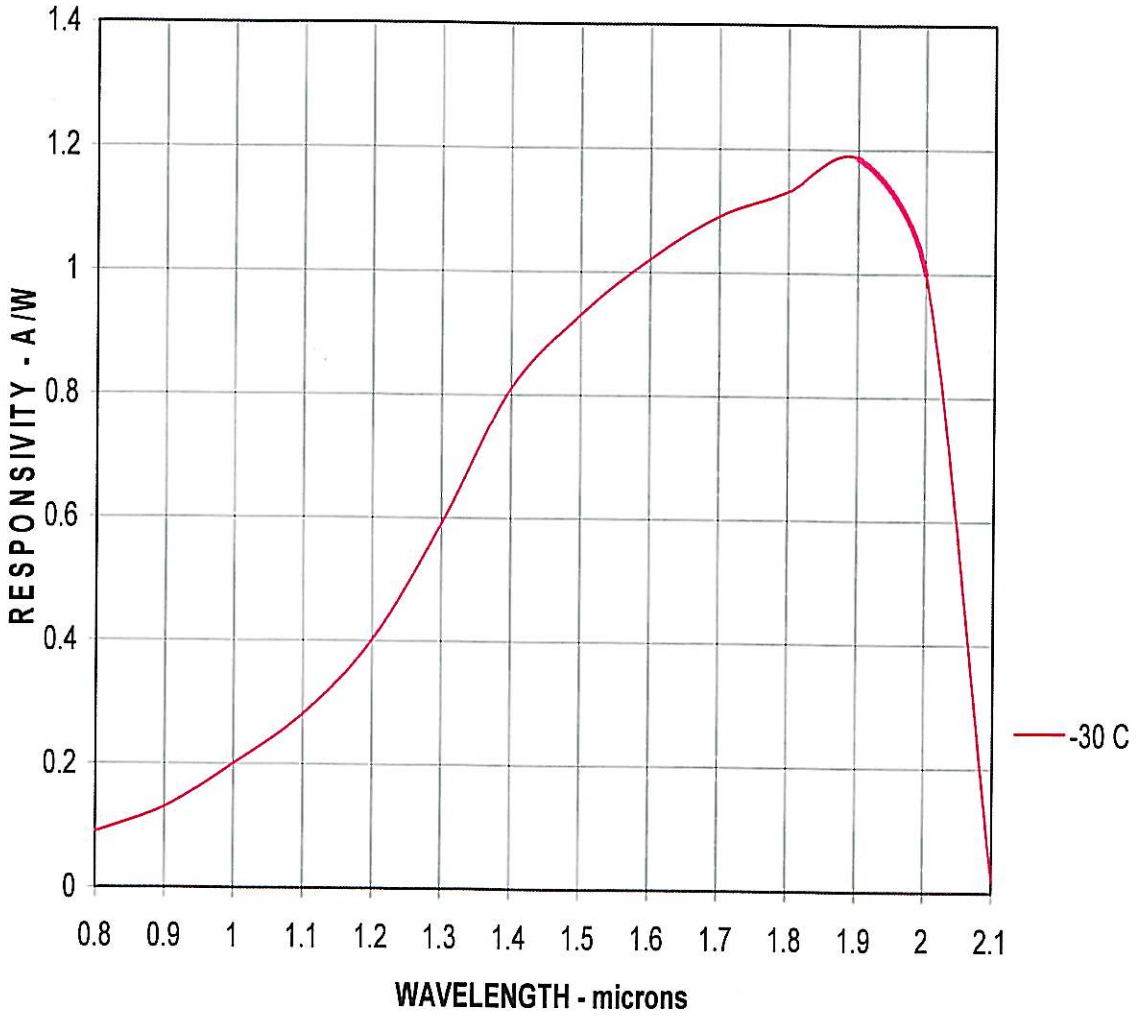
DSS-IGA1.9A PHOTODIODES

SPECTRAL RESPONSE - IGA1.9 AMBIENT-series



DSS-IGA1.9TC PHOTODIODES

SPECTRAL RESPONSE - IGA1.9 TC-series



HORIBA JOBIN YVON INC 3880 PARK AVE, EDISON, NJ 08820-3012
732-494-8660

OPERATING THE DSS-SERIES PHOTODIODE/RECEIVER

POWER SUPPLY: A bipolar power supply is required, +,- 6VDC to +,-15VDC, 20mA. This means a +V, central/common ground and a –V connection - 3 wires total, to pins 6, 7, & 8 on the D-sub connector. The power supply pins should be bypassed physically close to the amplifier module. Double check wiring prior to turning on power. Improper /reverse wiring will damage the unit.

GAIN SELECT: The unit is supplied with a switch which provides a 10:1 HI/LO gain function. HI Gain is the up position on the switch; LO Gain is the down position. Consult the individual data sheet for specific values.

AMBIENT LIGHT: Because of the high gains involved, the unit must be shielded from ambient background light during operation. Measurement errors and/or saturation can result from improper shielding.

OUTPUT CONNECTION: The signal output is thru a BNC connector (or BNC terminated cable in the case of the 2-color units) located on the back of the module.