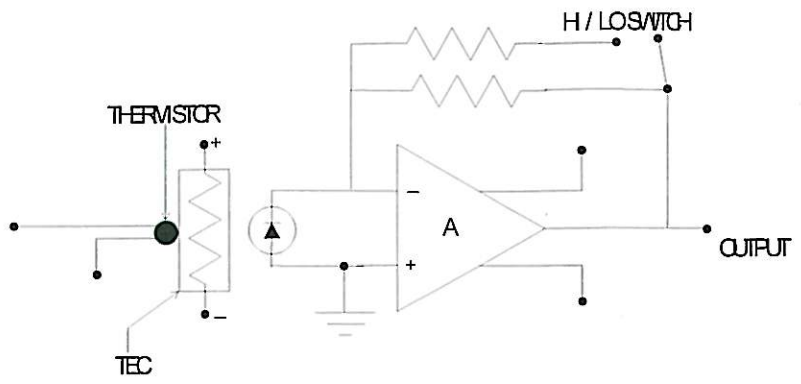
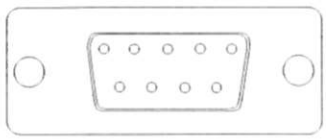
HORIBA JOBIN YVON

DSS - SERIES PHOTODIODE / RECEIVER

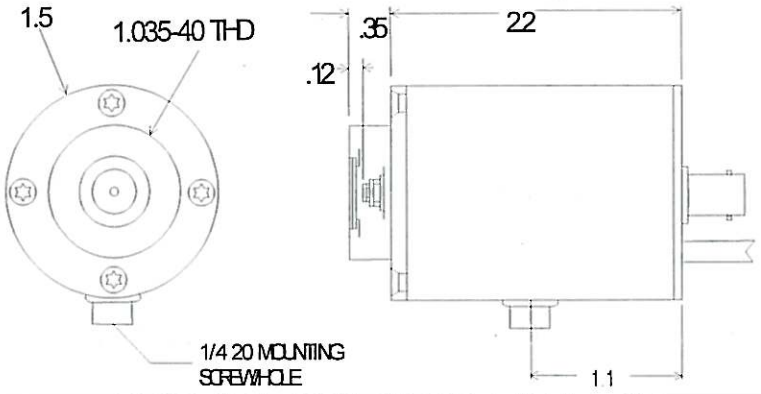


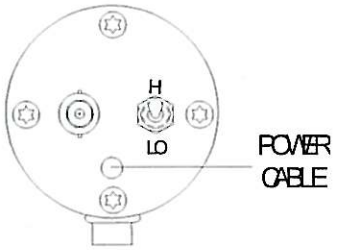
Part No: DSS-S025TC



DB-9 PIN OUT

1	Cooler (+)	6	+V
2	Cooler (-)	7	-V
3	Thermistor	8	GND
4	Thermistor	9	CASE GND
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 HI and LO gain functions are accessed by a toggle switch on the back of the module: HI = UP ; LO = DOWN. The output voltage is proportional to the input signal current: $V_{out} = I_{signal} \cdot R_f$. The PD/AMP is a DC coupled system. Care should be taken in shielding the unit from stray light during operation to prevent saturation of the amplifier (and potential failure).

SPECIFICATIONS		
Detector Type	**2.5 mm dia Silicon Photodiode**	
Operating Temperature - °C	**22 @ I_{tech} = 0.0 A**	**- 30 @ I_{tech} = 0.5 A**
Operating Wavelength - µm	**0.3 – 1.0**	**0.3 – 1.0**
Responsivity - V/W @ 850nm	**0.6×10^9 / 10^8**	**0.6×10^9 / 10^8**
Noise - $V/Hz^{1/2}$	**10×10^{-6} / 1.0×10^{-6}**	**5.0×10^{-6} / 1.0×10^{-6}**
NEP - $W/Hz^{1/2}$ @ 850nm	**< 1.5×10^{-14}**	**< 1.0×10^{-14}**
Bandwidth (-3dB) - Hz, typ	**DC – 500 / 2k**	**DC – 500 / 2k**
Power Requirements	**+/- 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 / Controller.**	

HORIBA JOBIN YVON - 3880 PARK AVE, EDISON, NJ 08820
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DSS-SxxxA PHOTODIODES

UVS PHOTODIODE
Typical Spectral Response - 22C

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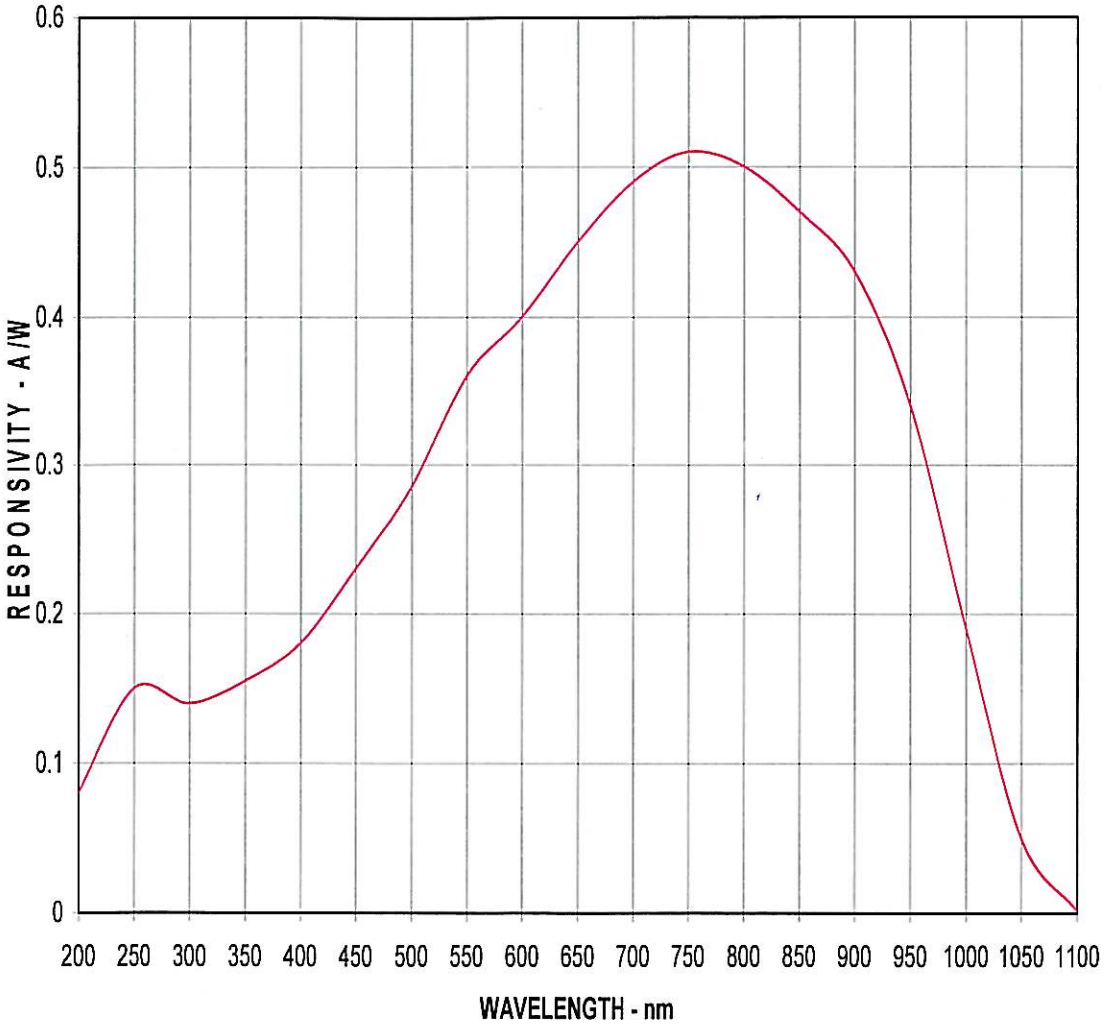
DSS-SxxxTC PHOTODIODES

UVS PHOTODIODE
Typical Spectral Response : -30C



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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.