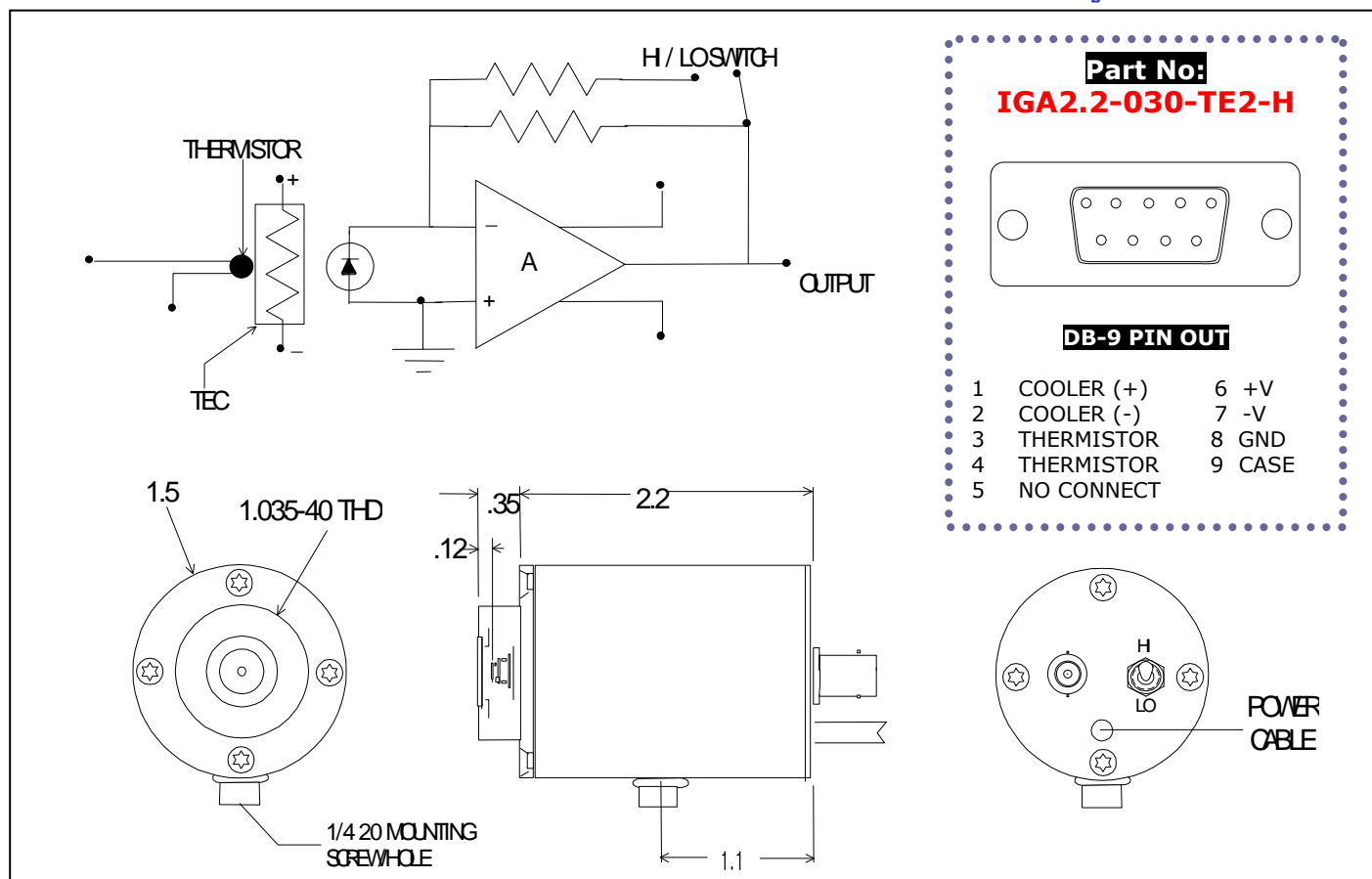


H - SERIES PHOTODIODE / RECEIVER



Application Note This unit is a high performance photodiode/receiver operated with a thermoelectric cooler for stabilization/cooling with a dual gain FET input transimpedance 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 light during operation to prevent saturation of the amplifier (and potential failure).

SPECIFICATIONS

| Detector Type | 3mm InGaAs Photodiode | |
|---|--|---------------------------------|
| Operating Temperature- °C | 25 @ $I_{tec} = 0.0 \text{ A}$ | -20 @ $I_{tec} = 0.6 \text{ A}$ |
| Operating Wavelength - μm | 1.2 - 2.5 | 1.2 - 2.5 |
| Responsivity- V/W @ pk | $1.2 \times 10^6 / 10^5$ | $1.2 \times 10^6 / 10^5$ |
| Noise- V/Hz ^{1/2} @ 100 Hz | $1.0 \times 10^{-5} / 10^{-6}$ | $1.8 \times 10^{-6} / 10^{-7}$ |
| NEP - W/Hz ^{1/2} @ 2.2 μm | $< 9.0 \times 10^{-12}$ | $< 1.0 \times 10^{-12}$ |
| 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. | |

RoHS Compliant