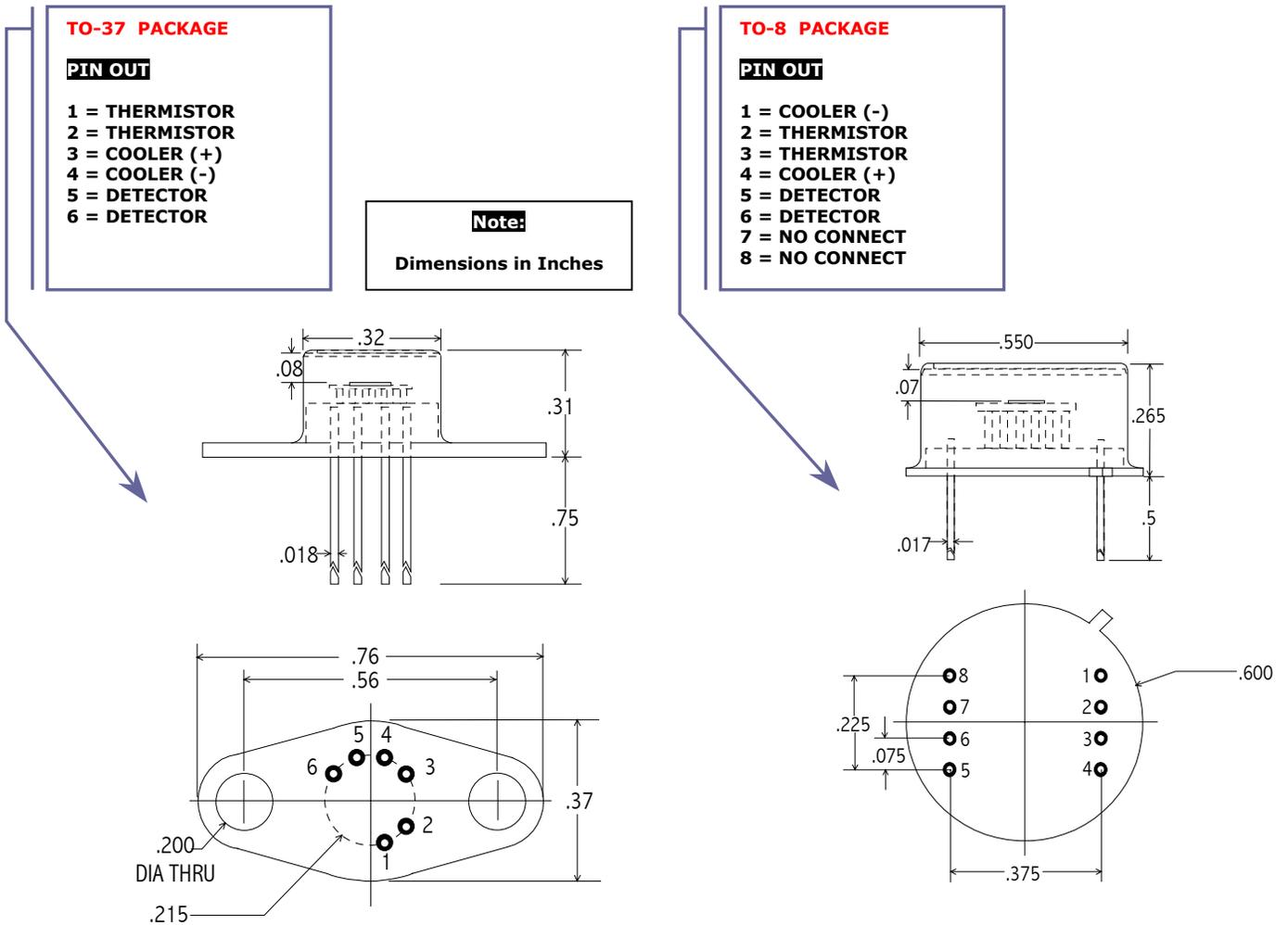


TE - COOLED PHOTODETECTORS



Operating Note

The TE cooled photodetector series consists of a high performance photoconductor mounted on a thermoelectric cooler, all housed in a TO-37 package. A thermistor is mounted to the TEC's cold plate to provide a precise, reliable temperature monitor. Before operation VERIFY ELECTRICAL WIRING, else catastrophic damage may be sustained by the unit. Electrical power consumption can exceed 1watt (1V / 1.00A); therefore, this package must be suitably heat sunk. Thermal grease with secure clamping is recommended for power dissipation. Temperature levels below -10°C are possible with an optimized mechanical assembly.

SPECIFICATIONS

Part Number	PBS - 010 - TE1		PBS - 020 - TE1		PBS - 030 - TE1	
	22	-10	22	-10	22	-10
Operating Temperature (°C)	22	-10	22	-10	22	-10
Active Area	1 mm x 1 mm		2 mm x 2 mm		3 mm x 3 mm	
Detector Resistance (Ω), typ	0.3 - 1.5 M	0.7 - 3.0 M	0.3 - 1.5 M	0.7 - 3.0 M	0.5 - 2.0 M	0.7 - 4.0 M
Responsivity (2.6um) V/W,	> 2 x 10 ⁵	> 4 x 10 ⁵	> 2 x 10 ⁵	> 4 x 10 ⁵	1 x 10 ⁵	2 x 10 ⁵
D*(2.6um,500Hz,1Hz) cm-Hz ^{1/2} /W	> 1 x 10 ¹¹	> 2 x 10 ¹¹	> 1 x 10 ¹¹	> 1.5 x 10 ¹¹	> 8 x 10 ¹⁰	> 2 x 10 ¹¹
Thermistor Resistance (kΩ)	1.7 nom	7.5 nom	1.7 nom	7.5 nom	1.7 nom	7.5 nom
Cooler Current (A)	0.0	0.65	0.0	0.65	0.0	0.65
Maximum Cooler Current (A)	1.00					