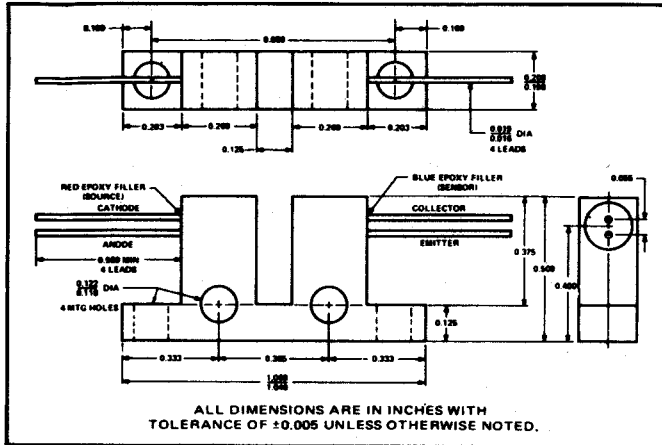
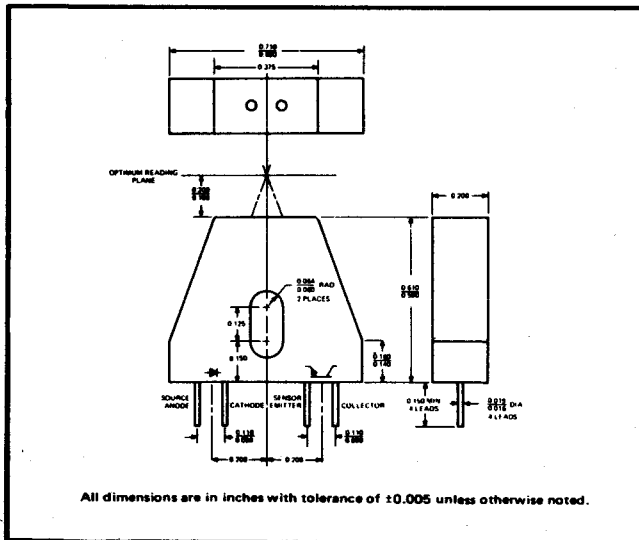


Case Outlines



TIL138



TIL139

Source and Sensor Assemblies

Device Type	Type	On-state Collector Current			Off-state Collector Current		Key Features
		min. IC(on) mA	" IF mA	" VCE V	max. IC(off) nA	" VCE V	
TIL138	One-channel transmissive assembly	1.6	35	0.5	25	30	A TIL32 gallium arsenide IRED and a TIL78 phototransistor mounted in a plastic housing Standard dual-in-line spacing High-gain darlington phototransistor Standard dual-in-line pin spacing Standard dual-in-line pin spacing
TIL139	One-channel reflective assembly	0.4	15	0.5	—	—	
TIL143	One-channel transmissive assembly	10 μ A	40	5	25	30	
TIL144	One-channel transmissive assembly	200 μ A	20	10	100	10	
TIL145	One-channel transmissive assembly	50 μ A	20	10	100	10	
TIL146	One-channel transmissive assembly	2	16	1	100	5	
TIL147	One-channel transmissive assembly	16	50	1	100	5	
TIL148	One-channel transmissive assembly	4	20	5	100	10	
		1	20	5	100	10	

Custom Built Source and Sensor Arrays for Card/Tape Reading and Encoder Applications

The TIL23 light emitting diode and the LS600 series NPN silicon phototransistor are available printed circuit board mounted to any mechanical layout and to any number of channels that may be required. Electrical preselection on sensitivity ensures accommodation of any type of mechanical interface media and compatibility with most circuit design requirements.

Both the units are offered in a 1/16" diameter metal package with an integral columnating lens. The package advantages are

- Hermeticity
- Full military operating temperature range
- Small size for high packing density
- Complete versatility of geometry

The measurement equipment used on production has National Physical Laboratory and National Bureau of Standards calibration and hence the units from this line have been regarded as an industry standard for a number of years.

Texas Instruments has undertaken many types of custom arrays and welcomes enquiries for any quantity of boards.

The package construction consists of the semiconductor chip alloyed to a Kovar base giving good heat dissipation. Following the bonding operation the lens is hermetically sealed to the base. A ceramic washer maintains the electrical isolation between the poles of the device.

The material used for the Printed Circuit board is a glass fibre filled epoxy. The board has a 300 gram/square metre copper clad both sides. The board advantages are

- Mechanically strong
- Dimensionally stable
- Fire retardant
- Moisture resistant
- Can accommodate non optoelectronic components on the same board