

# SIDE LOOK PACKAGE NPN PHOTODETECTOR

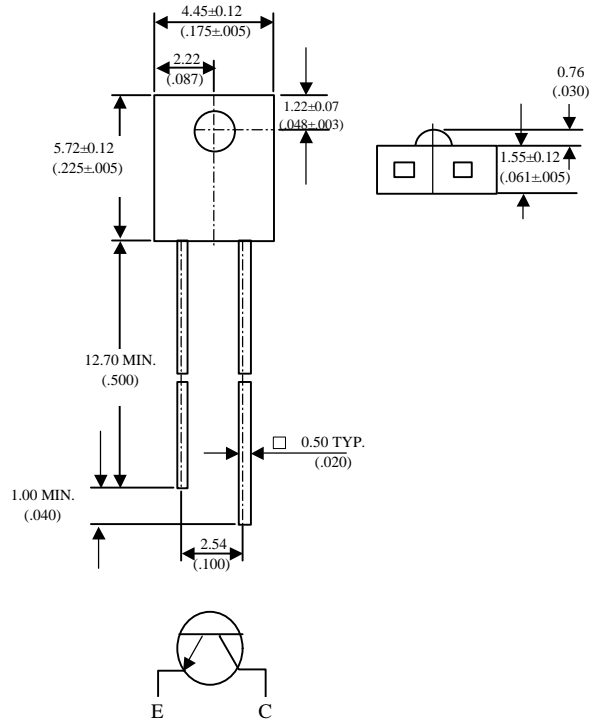
## MID-11H22

### Description

The MID-11H22 is a NPN silicon phototransistor mounted in a lensed , special dark plastic and side looking package.

### Package Dimensions

Unit: mm ( inches )



### Features

- Wide range of collector current
- Lensed for high sensitivity
- Low cost plastic package
- Good spectral matching to IRED ( $\lambda_p > 800$  nm) type.

Notes :

1. Tolerance for excess molding compound is  $\pm 0.005$ ".
2. Lead spacing is measured where the leads emerge from the package.

### Absolute Maximum Ratings

@  $T_A = 25^\circ\text{C}$

Parameter	Maximum Rating	Unit
Power Dissipation	100	mW
Collector-Emitter Voltage	30	V
Emitter-Collector Voltage	5	V
Operating Temperature Range	-55°C to +100°C	
Storage Temperature Range	-55°C to +100°C	
Lead Soldering Temperature	260°C for 5 seconds	

Optical-Electrical Characteristics

@ T<sub>A</sub>=25°C

Parameter	Test Conditions	Symbol	Min.	Typ .	Max.	Unit
Collector-Emitter Breakdown Voltage	I <sub>c</sub> =0.1mA Ee=0	V <sub>(BR)CEO</sub>	30			V
Emitter-Collector Breakdown Voltage	I <sub>e</sub> =0.1mA Ee=0	V <sub>(BR)ECO</sub>	5			V
Collector-Emitter Saturation Voltage	I <sub>c</sub> =0.5 mA Ee=0.1mW/cm <sup>2</sup>	V <sub>CE(SAT)</sub>			0.4	V
Rise Time	V <sub>R</sub> =30V , 0=1KΩ I <sub>C</sub> =1mA	Tr		15		μS
Fall Time		Tf		15		
Collector Dark Current	V <sub>CE</sub> =10V Ee=0	I <sub>CEO</sub>			100	nA
On State Collector Current	V <sub>CE</sub> =5V Ee=0.1mW/cm <sup>2</sup>	I <sub>C(ON)</sub>		0.38		mA

Typical Optical-Electrical Characteristic Curves

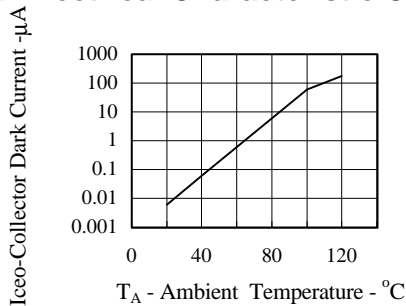


FIG.1 COLLECTOR DARK CURRENT VS AMBIENT TEMPERATURE

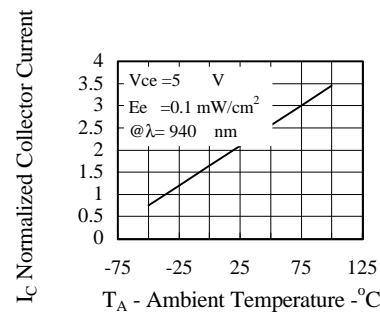


FIG.2 NORMALIZED COLLECTOR CURRENT VS AMBIENT TEMPERATURE

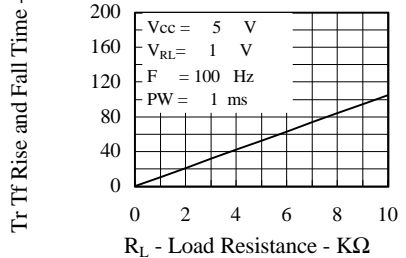


FIG.3 RISE AND FALL TIME VS LOAD RESISTANCE

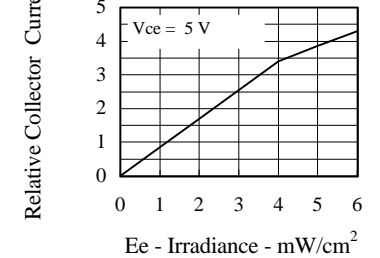


FIG.4 RELATIVE COLLECTOR CURRENT VS IRRADIANCE

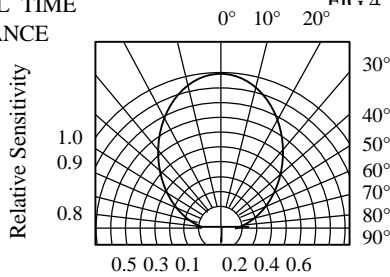


FIG.5 SENSITIVITY DIAGRAM