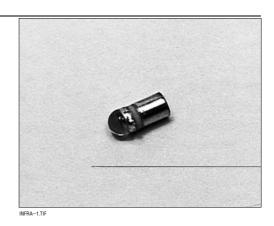
Silicon Photodarlington

FEATURES

- Miniature, hermetically sealed, pill style, metal can package
- 48° (nominal) acceptance angle
- Wide operating temperature range (- 55°C to +125°C)
- Ideal for direct mounting to printed circuit boards
- · Wide sensitivity ranges
- Mechanically and spectrally matched to SE2460 and SE2470 infrared emitting diodes

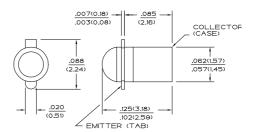


DESCRIPTION

The SD2410 is an NPN silicon photodarlington mounted in a hermetically sealed glass lensed metal can package. This package directly mounts in double sided PC boards.

OUTLINE DIMENSIONS in inches (mm)

 $\begin{array}{ccc} \text{Tolerance} & 3 \text{ plc decimals} & \pm 0.005 (0.12) \\ & 2 \text{ plc decimals} & \pm 0.020 (0.51) \end{array}$



DIM_013.cdr



Silicon Photodarlington

ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Light Current	l _L				mA	V _{CE} =5 V
SD2410-001		1.0				H=1 mW/cm ^{2 (1)}
SD2410-002		3.0				
SD2410-003		6.0				
Collector Dark Current	ICEO			250	nA	V _{CE} =10 V, H=0
Collector-Emitter Breakdown Voltage	V _(BR) CEO	15			V	I _C =100 μA
Emitter-Collector Breakdown Voltage	V _{(BR)ECO}	5.0			V	I _E =100 μA
Collector-Emitter Saturation Voltage	VCE(SAT)			1.1	V	Ic=1 mA
						H=5 mW/cm ²
Angular Response (2)	Ø		48		degr.	I _F =Constant
Rise And Fall Time	t _r , t _f		75		μs	Vcc=5 V, I _L =1 mA
						R _L =100 Ω

- Notes
 1. The radiation source is a tungsten lamp operating at a color temperature of 2870°K.
 2. Angular response is defined as the total included angle between the half sensitivity points.

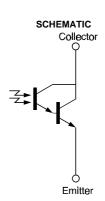
ABSOLUTE MAXIMUM RATINGS

(25°C Free-Air Temperature unless otherwise noted) Collector-Emitter Voltage 15 V Emitter-Collector Voltage 5 V Power Dissipation 125 mW (1) Operating Temperature Range -55°C to 125°C Storage Temperature Range -65°C to 150°C Soldering Temperature (10 sec) 260°C

Notes

1. Derate linearly from 25°C free-air temperature at the rate of

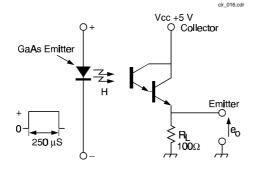
1.19 mW/°C.



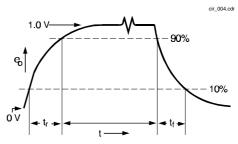
Honeywell reserves the right to make changes in order to improve design and supply the best products possible. Honeywell

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SWITCHING TIME TEST CIRCUIT



SWITCHING WAVEFORM



-15 0

Angular displacement - degrees

+15 +30 +45 +60

Fig. 2 Non-Saturated Switching Time vs Load Resistance

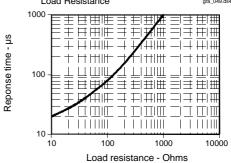
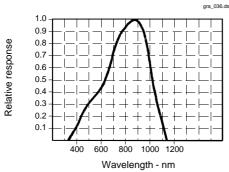


Fig. 3 Spectral Responsivity

0.1

0.0



All Performance Curves Show Typical Values



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