



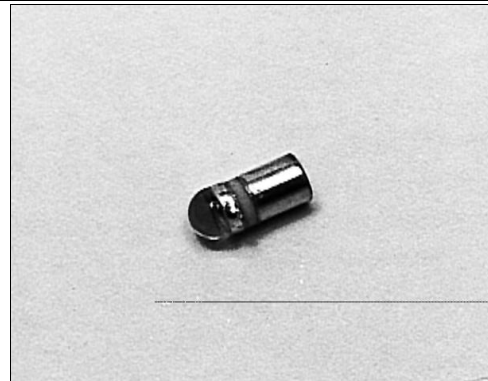
THE DATASHEET OF SD2410-002

SD2410

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



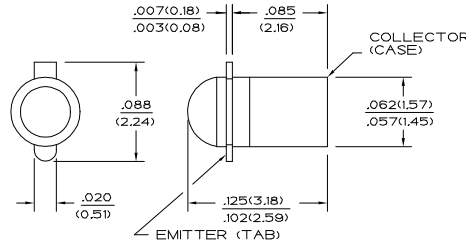
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DESCRIPTION

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)

Tolerance 3 plc decimals $\pm 0.005(0.12)$
2 plc decimals $\pm 0.020(0.51)$



DIM_013.cdr

SD2410

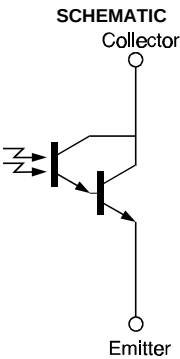
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ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)						
PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Light Current SD2410-001 SD2410-002 SD2410-003	I _L	1.0 3.0 6.0			mA	V _{CE} =5 V H=1 mW/cm ² (1)
Collector Dark Current	I _{CEO}			250	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	V _{CE(SAT)}		1.1		V	I _C =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	V _{CC} =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.



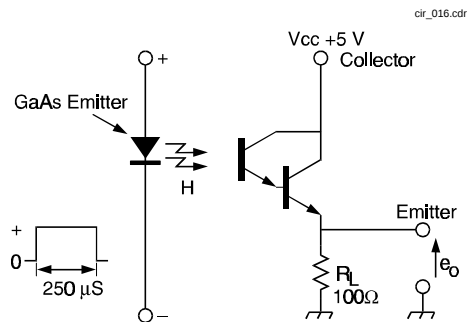
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SWITCHING TIME TEST CIRCUIT



SWITCHING WAVEFORM

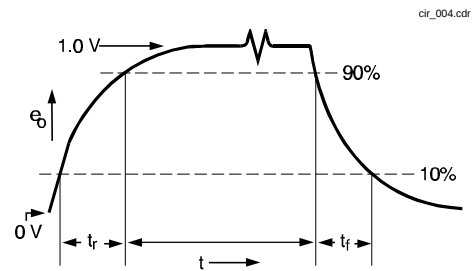


Fig. 1 Responsivity vs Angular Displacement

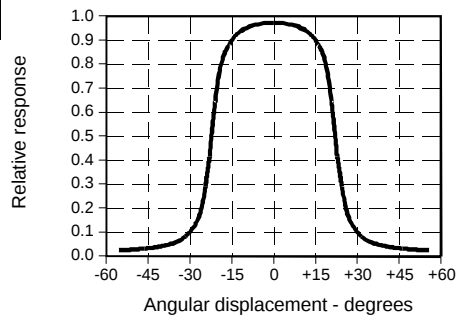


Fig. 2 Non-Saturated Switching Time vs Load Resistance

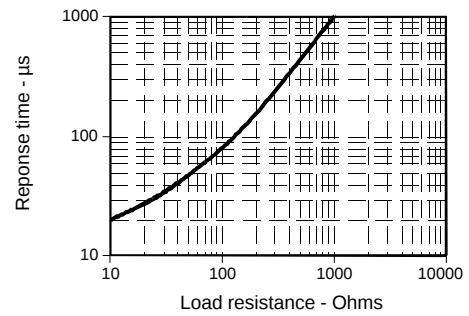
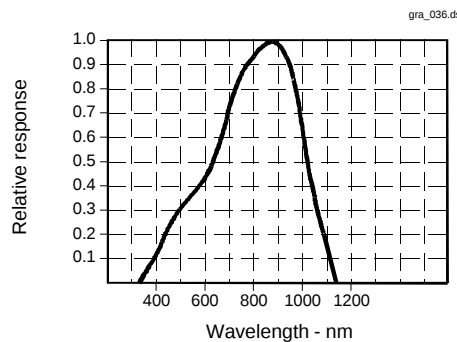


Fig. 3 Spectral Responsivity



All Performance Curves Show Typical Values



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