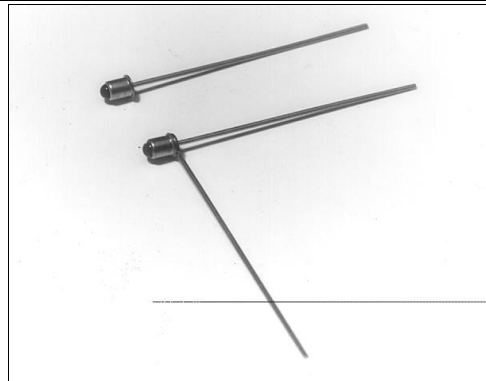


SD1410

Silicon Photodarlington

FEATURES

- Compact metal can coaxial package
- 24° (nominal) acceptance angle
- High output currents
- Wide sensitivity ranges
- Wide operating temperature range (-55°C to +125°C)
- Mechanically and spectrally matched to SE1450 and SE1470 infrared emitting diodes



INFRA-63.TIF

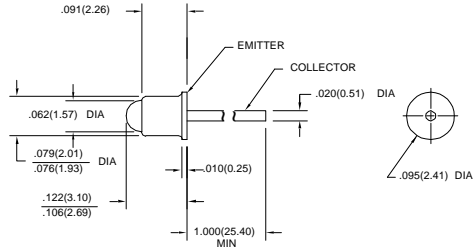
DESCRIPTION

The SD1410 is an NPN silicon photodarlington mounted in a glass lensed metal can coaxial package. The package may have a tab or second lead welded to the can as an optional feature (SD1410-XXXL). Both leads are flexible and may be formed as required to fit various mounting configurations.

OUTLINE DIMENSIONS in inches (mm)

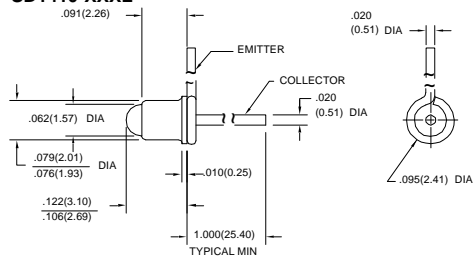
Tolerance 3 plc decimals ±0.005(0.12)
2 plc decimals ±0.020(0.51)

SD1410-XXX



DIM_20a.ds4

SD1410-XXXL



DIM_20b.ds4

SD1410

Silicon Photodarlington

ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Light Current SD1410-001, SD1410-001 L SD1410-002, SD1410-002 L SD1410-003, SD1410-003 L SD1410-004, SD1410-004 L	I_L	0.6 2.0 4.0 8.0			mA	$V_{CE}=5\text{ V}$ $H=0.2\text{ mW/cm}^2$ (1)
Collector Dark Current	I_{CEO}			250	nA	$V_{CE}=10\text{ V}$, $H=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	15			V	$I_C=100\text{ }\mu\text{A}$
Emitter-Collector Breakdown Voltage	$V_{(BR)ECO}$	5.0			V	$I_E=100\text{ }\mu\text{A}$
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$			1.1	V	$I_C=1\text{ mA}$ $H=1\text{ mW/cm}^2$
Angular Response (2)	\emptyset		24		degr.	$I_F=\text{Constant}$
Rise And Fall Time	t_r, t_f		75		μs	$V_{CC}=5\text{ V}$, $I_L=1\text{ mA}$ $R_L=100\text{ }\Omega$

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

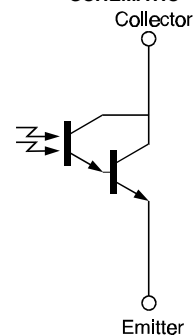
(25°C Free-Air Temperature unless otherwise noted)

Collector-Emitter Voltage	15 V
Emitter-Collector Voltage	5 V
Power Dissipation	75 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 0.71 mW/°C.

SCHEMATIC



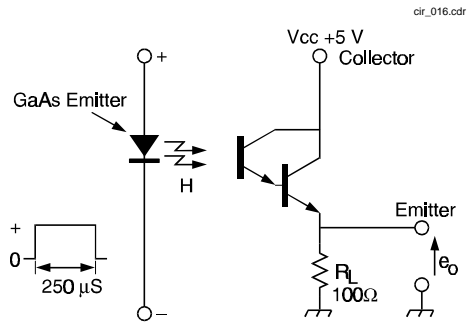
Honeywell reserves the right to make changes in order to improve design and supply the best products possible.

Honeywell

SD1410

Silicon Photodarlington

SWITCHING TIME TEST CIRCUIT



SWITCHING WAVEFORM

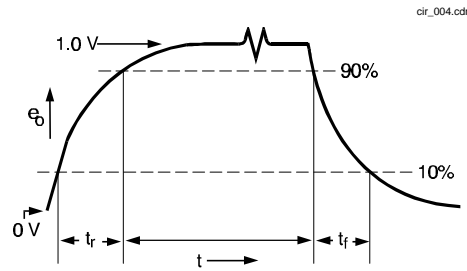


Fig. 1 Responsivity vs Angular Displacement

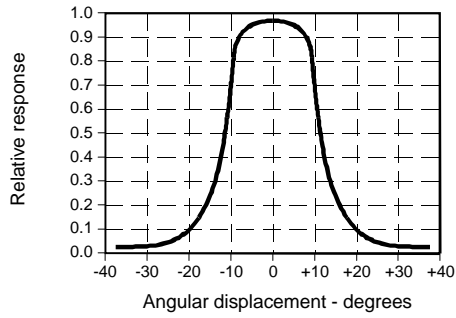


Fig. 2 Spectral Responsivity

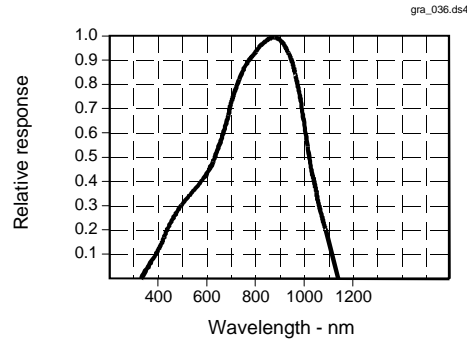
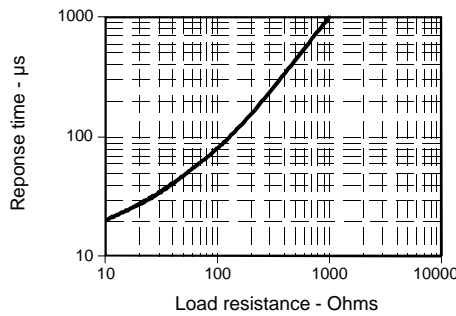


Fig. 3 Non-Saturated Switching Time vs Load Resistance



All Performance Curves Show Typical Values

SD1410
Silicon Photodarlington



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

Honeywell

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Phototransistors](#) category:

Click to view products by [Honeywell](#) manufacturer:

Other Similar products are found below :

[LTR-5576D](#) [QSD123A4R0](#) [ASDL-6620-C22](#) [OED-ST-8LR2](#) [OED-STR44B90-TR](#) [SD5410-109](#) [PT91-21C/TR7](#) [PT91-21C/TR10](#)
[LKPT30102B-A01\(XY\)](#) [L-51ROPT1D1](#) [BP 103-3/4](#) [BPY 62](#) [KPS-3227SP1C](#) [L-53P3BT](#) [L-53P3C](#) [L-93DP3BT](#) [L-93DP3C](#) [LL-503PTC2E-1AD](#) [LL-S150PTC-1A](#) [SCM-014TBT86](#) [SFH 309-56](#) [SFH 310 FA](#) [SFH 320](#) [SFH 320-3](#) [SFH 320 FA](#) [SFH 320-Z](#) [SFH 3400-Z](#) [OP508FA](#)
[TEMT1030](#) [LTR-301](#) [PGM5516](#) [PGM5516-MP](#) [PGM5526-MP](#) [PGM5537-MP](#) [PGM5549](#) [PGM5549-MP](#) [PGM5637D](#) [PGM5639D](#) [KPA-3010P3C](#) [SFH 313 FA-34](#) [VEMT4700F-GS08](#) [OP830WSL](#) [PT19-21B/L41/TR8](#) [PT91-21C](#) [KP-2012P3C](#) [TEKT5400S](#) [RPT-37PB3F](#) [RPM-075PTT86](#) [SD1410-128L](#) [SFH 320 FA-4-Z](#)