

DESCRIPTION

- T-1 plastic package
- 20° (nominal) acceptance angle
- Consistent optical properties
- Wide sensitivity ranges
- Mechanically and spectrally matched to SEP8505 and SEP8705 infrared emitting diodes

INFRA-22.TIF

Tolerance 3 plc decimals $\pm 0.005(0.12)$

SDP8405

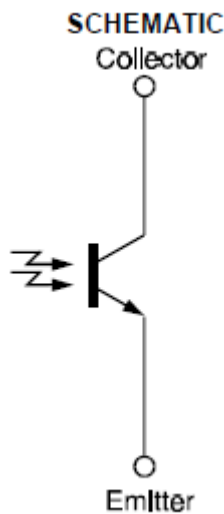
Silicon Phototransistor

ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)					
PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS
Light Current	I _L				mA
SDP8405-001		1.00			
SDP8405-002		2.00	14.0		
SDP8405-003		12.0	24.0		
Light Current	I _L				mA
SDP8405-011		0.16			
SDP8405-012		0.16	0.46		
SDP8405-013		0.32	0.32		
SDP8405-014		0.64	1.85		
SDP8405-015		1.25			
Collector Dark Current	I _{cpd}		100		nA
Collector-Emitter Breakdown Voltage	V _{ce(sic)}	30			V
Emitter-Collector Breakdown Voltage	V _{ec(sic)}	5.0			V
Collector-Emitter Saturation Voltage	V _{ce(sat)}		0.4		V
SDP8405-001 to -003					
SDP8405-011 to -015					
Angular Response (°)	θ		20		degr.
Rise And Fall Time	t _r , t _f		15		µs

- Notes
1. The radiation source is a tungsten lamp operating at a color temperature of 2870°K.
 2. The radiation source is an IRED with a peak wavelength of 935 nm.
 3. 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 30 V
Emitter-Collector Voltage 5 V
Power Dissipation 70 mW
Operating Temperature Range -40°C to 85°C
Storage Temperature Range -40°C to 85°C
Soldering Temperature (5 sec) 240°C

- Notes
1. Derate linearly from 25°C free-air temperature at the rate of 0.18 mW/°C.



SDP8405

Silicon Phototransistor

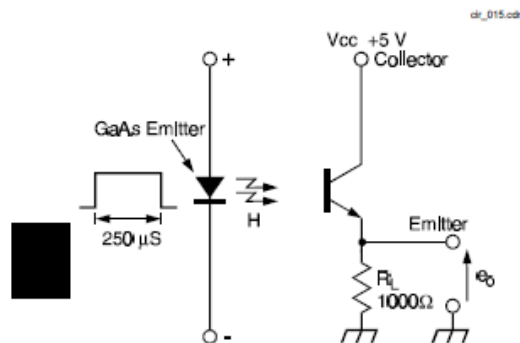


Fig. 1 Responsivity vs Angular Displacement

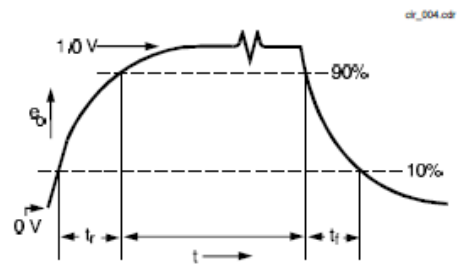
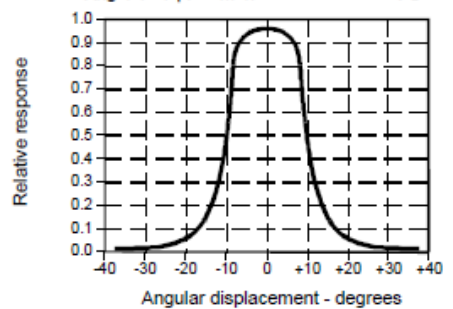


Fig. 2 Collector Current vs Ambient Temperature

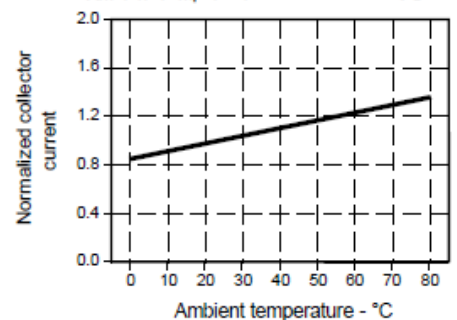


Fig. 3 Dark Current vs Temperature

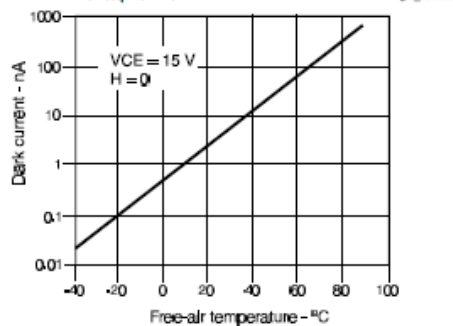


Fig. 4 Non-Saturated Switching Time vs Load Resistance

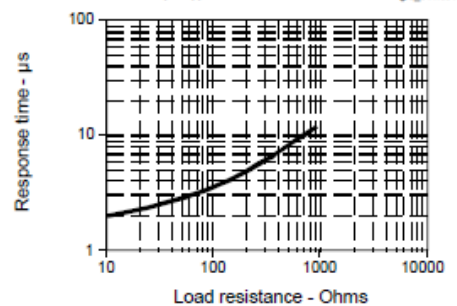


Fig. 5 Spectral Responsivity

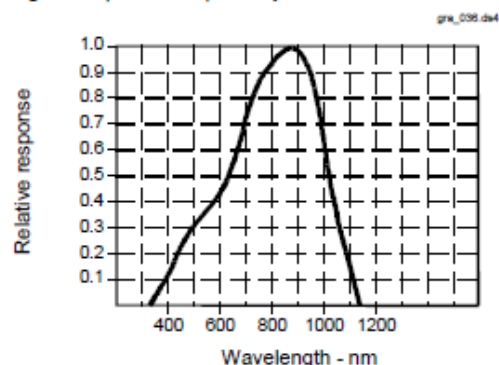
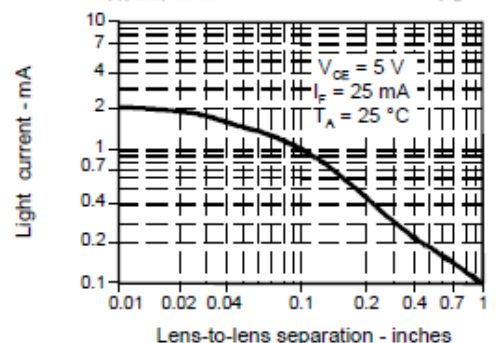


Fig. 6 Coupling Characteristics with SEP8505



All Performance Curves Show Typical Values