



SLT-50HL Series

NPN Phototransistor

Features

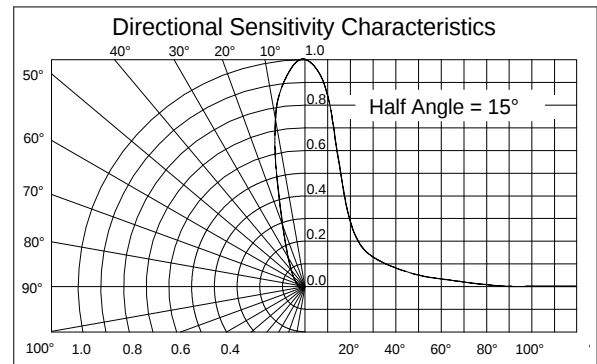
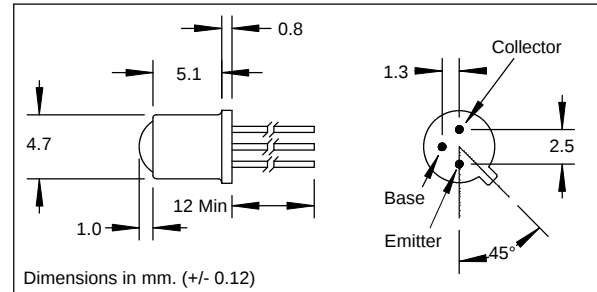
- Narrow receiving angle
- Spectrally Matched to IRED
- NPN Planar Epitaxial Process
- Multiple Sensitivity Ranges
- Extended Temperature Range
- Hermetic TO-18 case with high dome lens

Description

The SLT-50HL series consists of an NPN silicon planar epitaxial phototransistor mounted in a hermetically sealed TO-18 dome lens package. The TO-18 hermetic package provides high reliability in hostile environments. The various sensitivity ranges available provide the desired output to meet multiple application demands.

Absolute Maximum Ratings

Storage Temperature Range	-65°C to +150°C
Operating Temperature Range	-55°C to +125°C
Soldering Temperature (1)	260°C
Power Dissipation @ 25°C (2)	250mW



Electrical Characteristics (T_A=25°C unless otherwise noted)

Symbol	Parameter	Min	Typ	Max	Units	Test Conditions
I _{C(ON)}	On-State Collector Current:					
	SLT-50HL1	0.6			mA	V _{CE} =5V, Ee=5mW/cm ² (3)
	SLT-50HL2	1.2			mA	V _{CE} =5V, Ee=5mW/cm ² (3)
	SLT-50HL3	2.4			mA	V _{CE} =5V, Ee=5mW/cm ² (3)
	SLT-50HL4	4.0			mA	V _{CE} =5V, Ee=5mW/cm ² (3)
	SLT-50HL5	6.0			mA	V _{CE} =5V, Ee=5mW/cm ² (3)
	SLT-50HL6	12.0			mA	V _{CE} =5V, Ee=5mW/cm ² (3)
I _{CEO}	Collector Dark Current			50	nA	V _{CE} =10V, Ee=0
BV _{CEO}	Collector-Emitter Breakdown Voltage	40			V	I _C =100μA, Ee=0
BV _{CBO}	Collector-Base Breakdown Voltage	60			V	I _C =100μA, Ee=0
BV _{ECO}	Emitter-Collector Breakdown Voltage	7.5			V	I _C =-100μA, Ee=0
V _{CE(SAT)}	Collector-Emitter Saturation Voltage			0.4	V	I _C =1.0mA, I _B =0.5mA, Ee=0
t _r , t _f	Rise Time, Fall Time		3		μs	R _L =100 Ω, I _C =800μA, V _{CC} =5V (4)
λ _P	Maximum Sensitivity Wavelength		930		nm	
λ _R	Sensitivity Spectral Range	400		1100	nm	
θ _{1/2}	Acceptance Half Angle		15		deg	(off center-line)

Specifications subject to change without notice.

Notes: (1) >2 mm from case for <5 sec.

(2) derate @ 2.5mW/°C above 25°C.

(3) Ee = source @ 2854 °K

(4) Ee = source @ λ = 880 nm

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