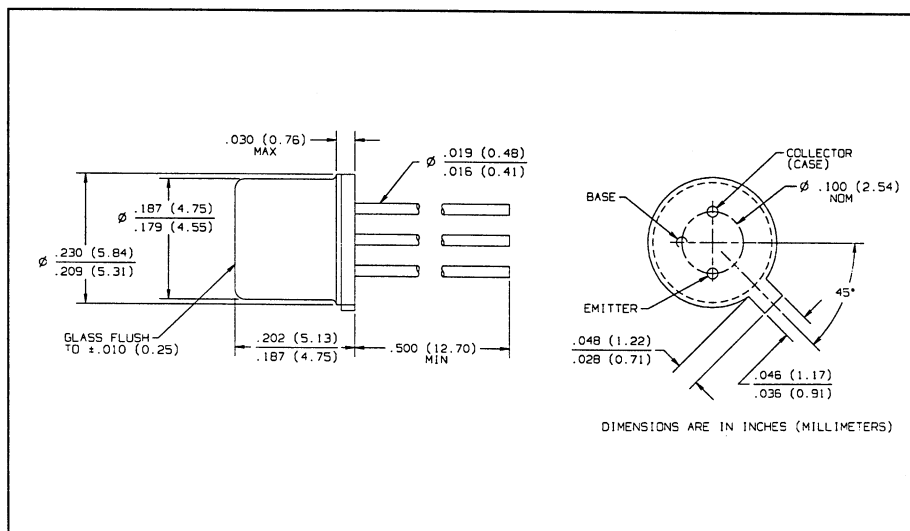
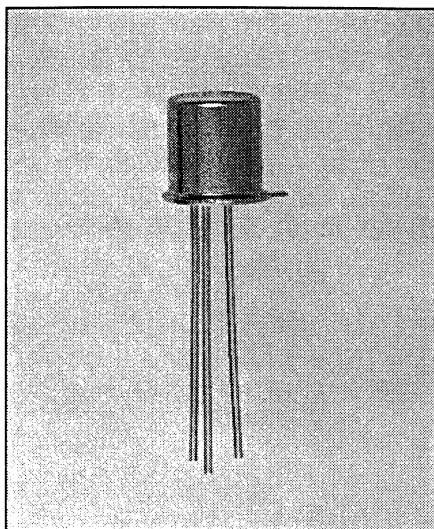


NPN Silicon Phototransistors

Types OP800WSL, OP801WSL, OP802WSL



Features

- Wide receiving angle
- Variety of sensitivity ranges
- Enhanced temperature range
- TO-18 hermetically sealed package
- Mechanically and spectrally matched to the OP130W and OP231W series emitters

Description

The OP800WSL series device consists of an NPN silicon phototransistor mounted in a hermetically sealed package. The wide receiving angle provides relatively even reception over a large area. TO-18 packages offer high power dissipation and superior hostile environment operation.

Replaces

OP800W and K5201 series

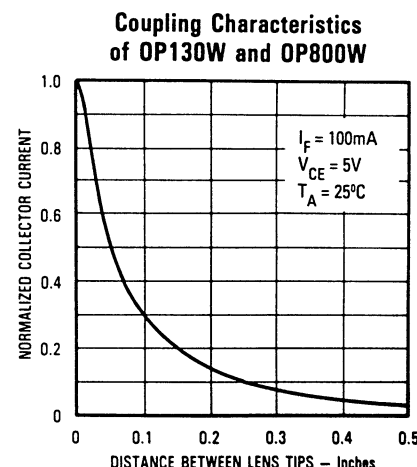
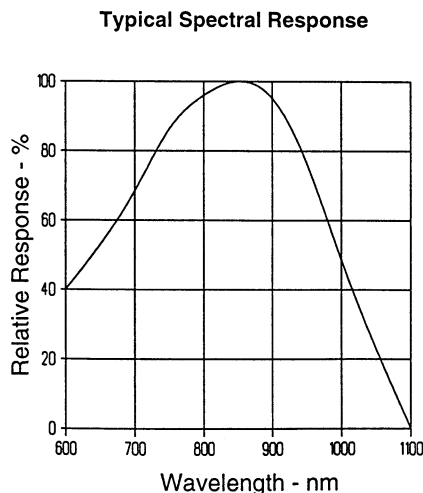
Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Collector-Emitter Voltage	30 V
Emitter-Collector Voltage	5.0 V
Continuous Collector Current	50 mA
Storage Temperature Range	-65°C to $+150^\circ\text{C}$
Operating Temperature Range	-65°C to $+125^\circ\text{C}$
Lead Soldering Temperature [1/16 inch (1.6 mm) from case for 5 sec. with soldering iron]	$260^\circ\text{C}^{(1)}$
Power Dissipation	$250\text{ mW}^{(2)}$

Notes:

- (1) RMA flux is recommended. Duration can be extended to 10 sec. max. when flow soldering.
- (2) Derate linearly $2.5\text{ mW}/^\circ\text{C}$ above 25°C .
- (3) Junction temperature maintained at 25°C .
- (4) Light source is an unfiltered tungsten bulb operating at $CT = 2870\text{ K}$ or equivalent infrared source.

Typical Performance Curves

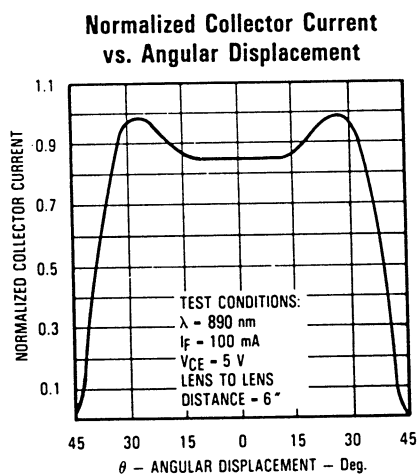
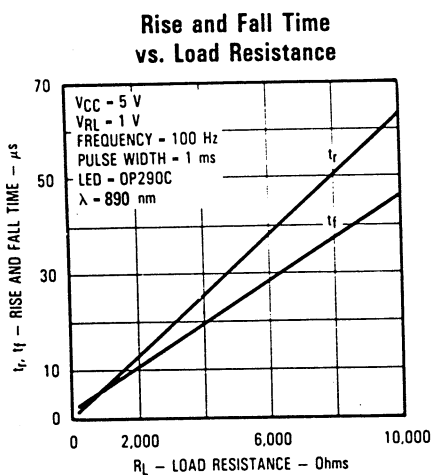
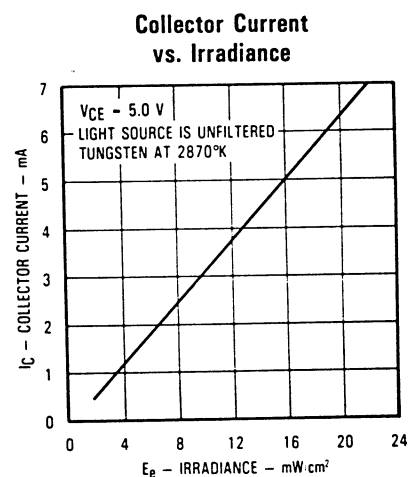
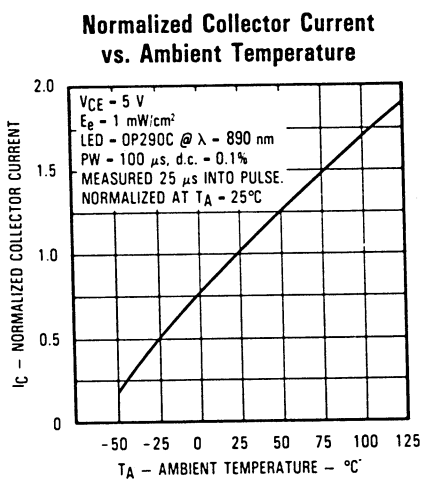
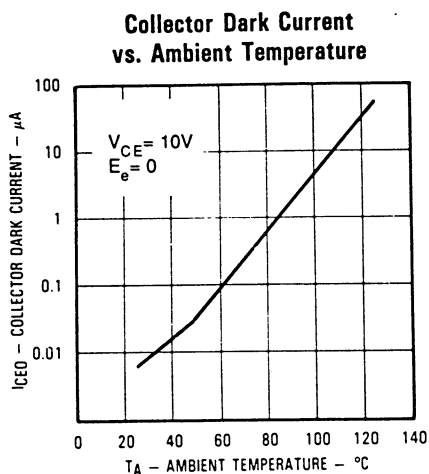


Types OP800WSL, OP801WSL, OP802WSL

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
$I_{C(ON)}^{(3)}$	On-State Collector Current	OP800WSL 0.3 OP801WSL 0.5 OP802WSL 2.5		3.0	mA mA mA	$V_{CE} = 5\text{ V}$, $E_e = 5\text{ mW/cm}^2$ ⁽⁴⁾
I_{CEO}	Collector Dark Current			100	nA	$V_{CE} = 10\text{ V}$, $E_e = 0$
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	30			V	$I_C = 100\text{ }\mu\text{A}$
$V_{(BR)ECO}$	Emitter-Collector Breakdown Voltage	5.0			V	$I_E = 100\text{ }\mu\text{A}$
$V_{CE(SAT)}^{(3)}$	Collector-Emitter Saturation Voltage			0.40	V	$I_C = 0.15\text{ mA}$, $E_e = 0.5\text{ mW/cm}^2$ ⁽⁴⁾
t_r t_f	Rise Time Fall Time		7.0 7.0		μs μs	$V_{CC} = 5\text{ V}$, $I_C = 0.80\text{ mA}$, $R_L = 100\text{ }\Omega$, See Test Circuit

Typical Performance Curves



Switching Time Test Circuit

