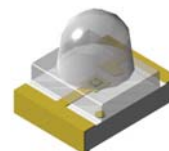


Dome Package Silicon Phototransistor

OP 9D38

Description

This series of PCB type SMT phototransistors is mold into Dome Type package with water clear lens.



Features

- Fast response time
- High photo sensitivity
- High speed and high sensitive silicon NPN material

Applications

- Counter
- Encoder
- Interrupter
- Infrared detector

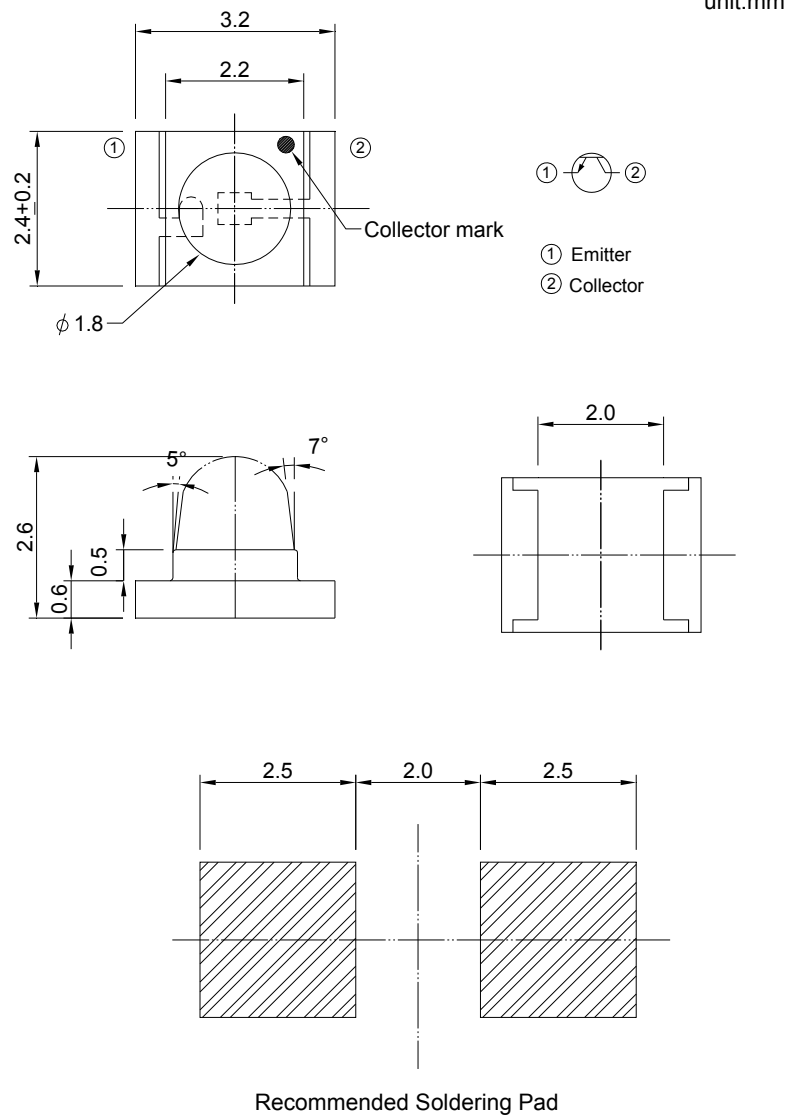


Absolute Maximum Rating at Ta =25°C, unless otherwise specified

Parameter	Symbol	Value	Unit
Emitter-Collector Voltage	V_{ECO}	5	V
Collector-Emitter Voltage	V_{CEO}	30	V
Collector Current	I_C	20	mA
Power Dissipation	P_C	75	mW
Operating Temperature Range	T_{opr}	-30 to + 85	°C
Storage Temperature	T_{stg}	-40 to + 85	°C
Soldering Temperature	T_{sol}	260	°C

Note: Please take note the Absolute Maximum Rating values. Any operation beyond the specified ratings in this table will result degradation of LED life-span and may cause LED to fail.

Package Dimension:



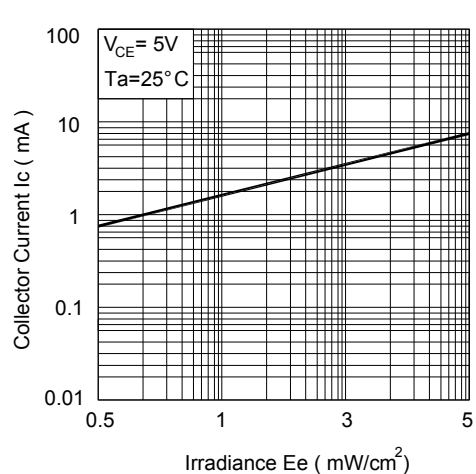
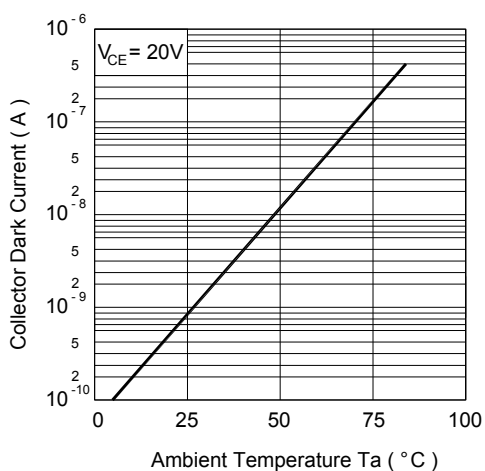
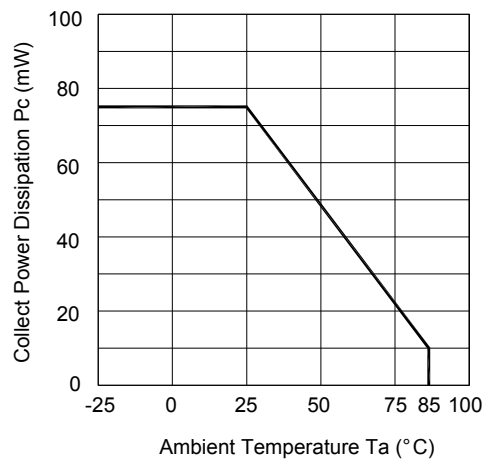
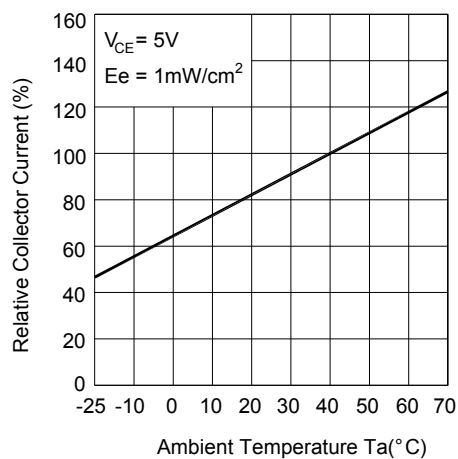
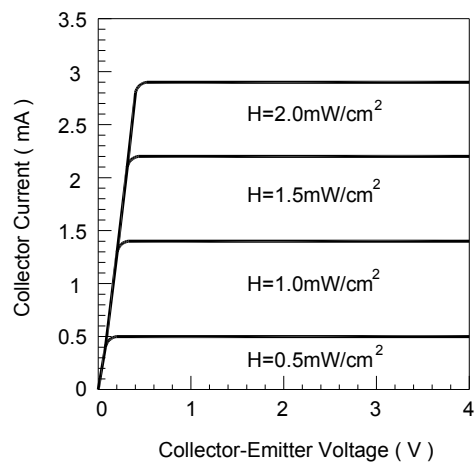
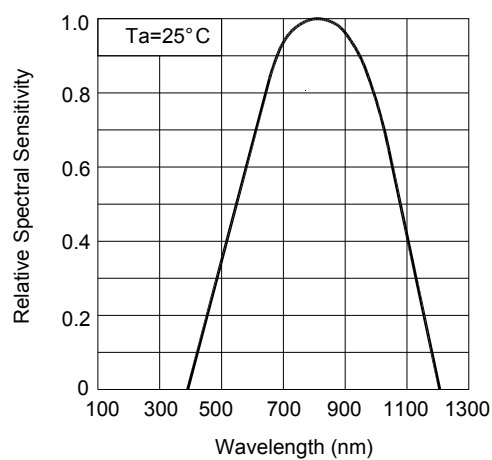
Notes:

1. All dimensions are millimeters.
2. Tolerance is ± 0.2 mm unless otherwise specified.
3. Specifications are subject to change without notice.

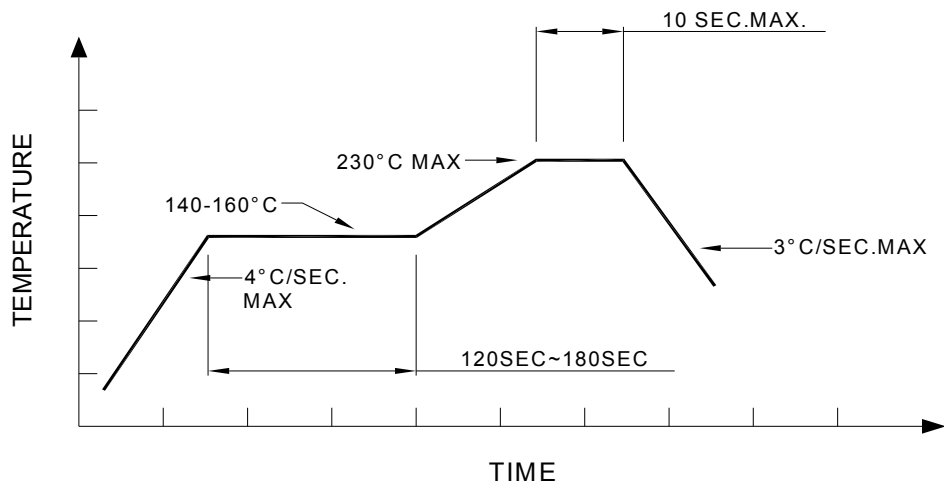
Optical Characteristics at Ta=25°C, unless otherwise specified

Parameter	Test condition	Symbol	Min	Typ.	Max	Unit
Emitter-Collector Breakdown Voltage	$I_C = 100\mu A$ $E_e = 0mW/cm^2$	BV_{ECO}	5	---	---	V
Collector- Emitter Breakdown Voltage	$I_C = 100\mu A$ $E_e = 0mW/cm^2$	BV_{CEO}	30	---	---	V
Collector-Emitter Saturation Voltage	$I_C = 2mA$ $E_e = 1mW/cm^2$	$V_{CE(SAT)}$	---	---	0.4	V
Collector Dark Current	$E_e = 0mW/cm^2$ $V_{CE} = 20V$	I_{CEO}	---	---	100	nA
On State Collector Current	$E_e = 1mW/cm^2$ $V_{CE} = 5V$	$I_{C(ON)}$	1.5	1.8		mA
Range of Spectral Bandwidth	---	$\lambda_{0.5}$	400	---	1200	nm
Wavelength of Peak Sensitivity	---	λ_p	---	860	---	nm
Rise Time	$V_{ce}=5V, I_c=1mA,$ $R_L=1000\Omega$	tr	---	15	---	μS
Fall Time		tf		15	---	

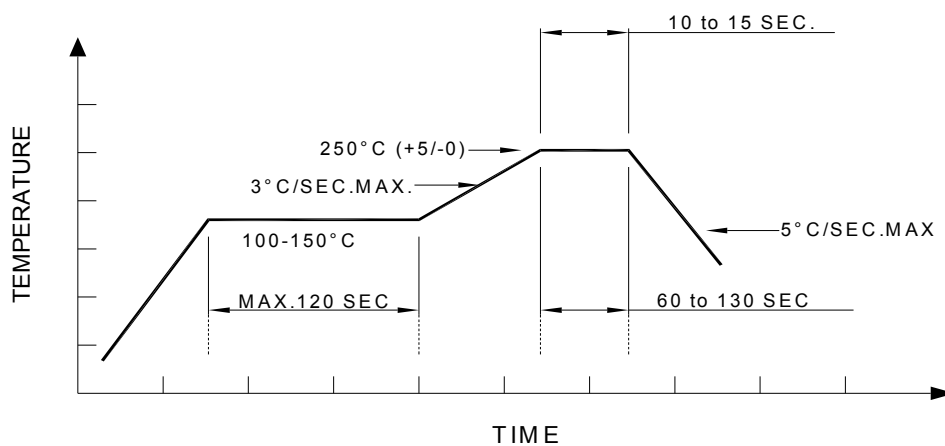
Typical Electro-optical Characteristics Curves



Recommended re-flow soldering profile:



Recommended Pb-free re-flow soldering profile:



Note:

All the specifications listed in this data sheet are suitable for general electronic equipment, office equipment and communication devices. Kindly consult Sales Representatives for specific reliabilities request, Forward Voltage, Luminous Intensity, Wavelength, Radiant Power or Viewing Angle.