

NMOP-10035

Description

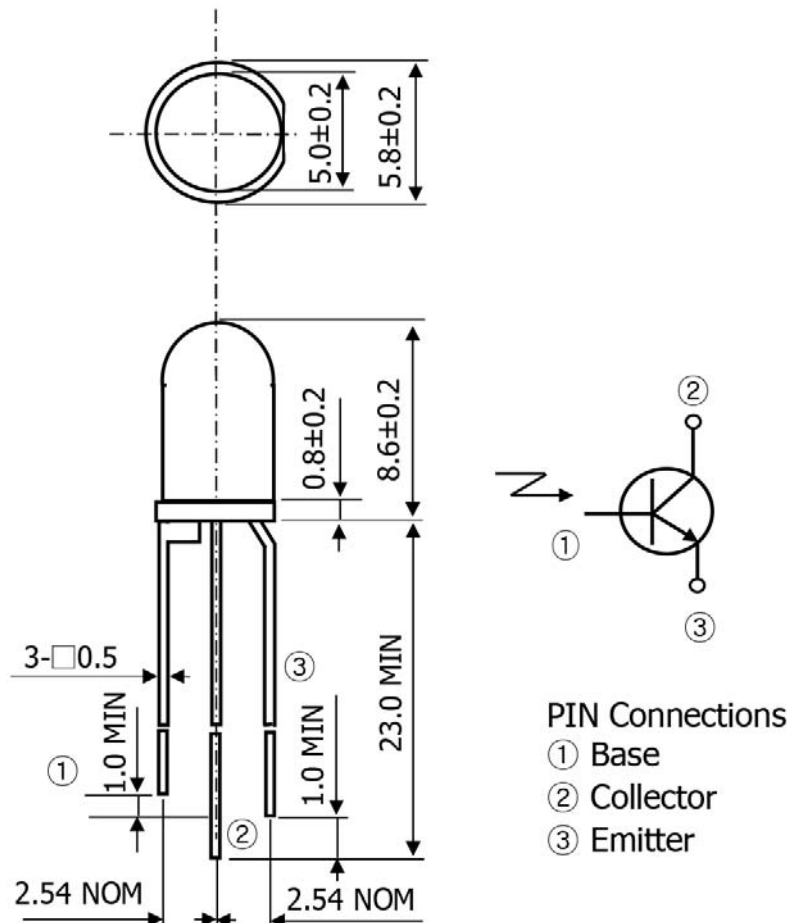
The NMOP-10035 is a silicon NPN phototransistor in a T1 3/4 plastic package which is designed for high sensitivity and medium sensing angle. This phototransistor is especially suitable for applications such as remote controls of various equipment.

Features

- High sensitivity
- Daylight filter
- With base terminal

Applications

- Remote control sensors
- Optical switches
- Infrared sensors



Note : All Dimensions are in millimeters

NMOP-10035

Absolute Maximum Ratings

[Ta = 25° C]

Parameter	Symbol	Rating	Unit
Collector Emitter Voltage	V_{CEO}	30	V
Emitter-Collector Voltage	V_{ECO}	6	V
Collector-Base Voltage	V_{CBO}	30	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	20	mA
Collector Power Dissipation	P_C	75	mW
Operating Temperature	$T_{orp.}$	-25 ~ +85	° C
Soldering Temperature *1	$T_{sol.}$	260	° C

*1: Soldering time \leq 5 seconds.

Electro-optical Characteristics

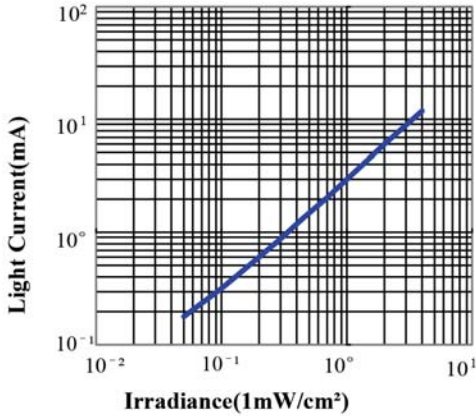
[Ta = 25° C]

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Dark Current	I_{CBO}	$V_{CEO} = 10V,$ $E_e = 0V$		0.05	0.5	μA
Light Current	I_{CBL}	$V_{CEO} = 5V,$ $E_e = 1mW/cm^2$		3		mA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 0.5mA,$ $E_e = 1mW/cm^2$		0.18		V
Switching Speed	Rise time	$V_{CC} = 2V,$ $I_C = 1mA,$ $R_L = 100\Omega$		3		μS
	Fall time			3		
Spectral Sensitivity	λ		720		1,100	nm
Wavelength of Peak Sensitivity	λ_p			880		nm
Half Sensing Angle	$\Delta\theta$			± 20		Deg

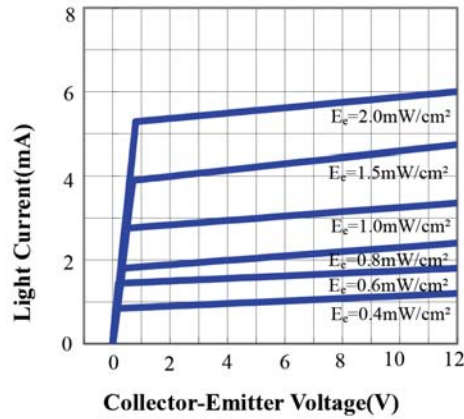
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Typical Electro-Optical Characteristics Curves

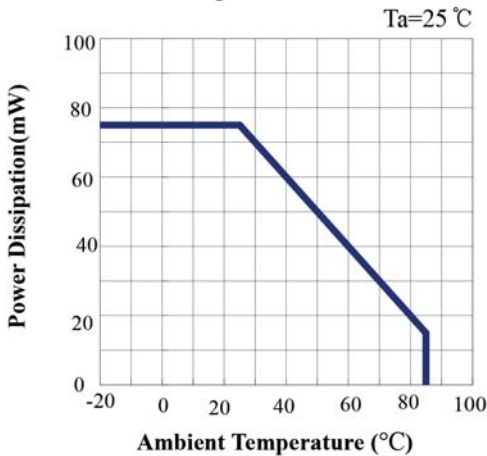
- **Light Current vs Irradiance**
FORWARD VOLTAGE
 $T_a=25\text{ }^\circ\text{C}$
 $V_{CE}=5\text{V}$



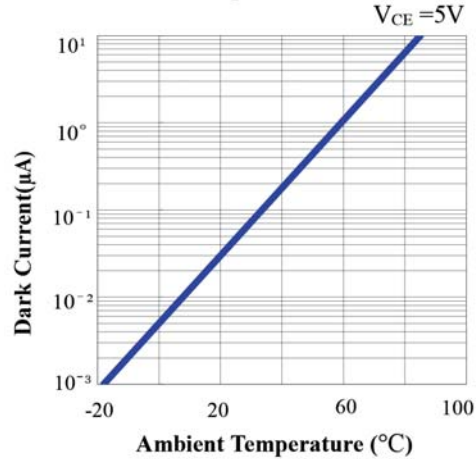
- **Light Current vs Collector-Emitter Voltage**
 $T_a=25\text{ }^\circ\text{C}$



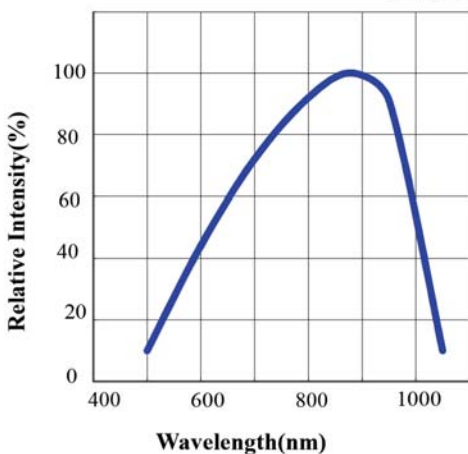
- **Power Dissipation vs Ambient Temperature**
 $T_a=25\text{ }^\circ\text{C}$



- **Dark Current vs Ambient Temperature**
 $V_{CE}=5\text{V}$



- **Spectral Sensitivity**
 $T_a=25\text{ }^\circ\text{C}$



- **Sensitivity Diagram**
 $T_a=25\text{ }^\circ\text{C}$

