

BRIGHT LED ELECTRONICS CORP.

SILICON PHOTO TRANSISTORS SPECIFICATION



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VERSION : 1.0

●COMMODITY : T-1 3/4 Standard , 5 ϕ

●DEVICE NUMBER : BPT-BP0914

●LENS APPEARANCE : Black

●APPLICATIONS

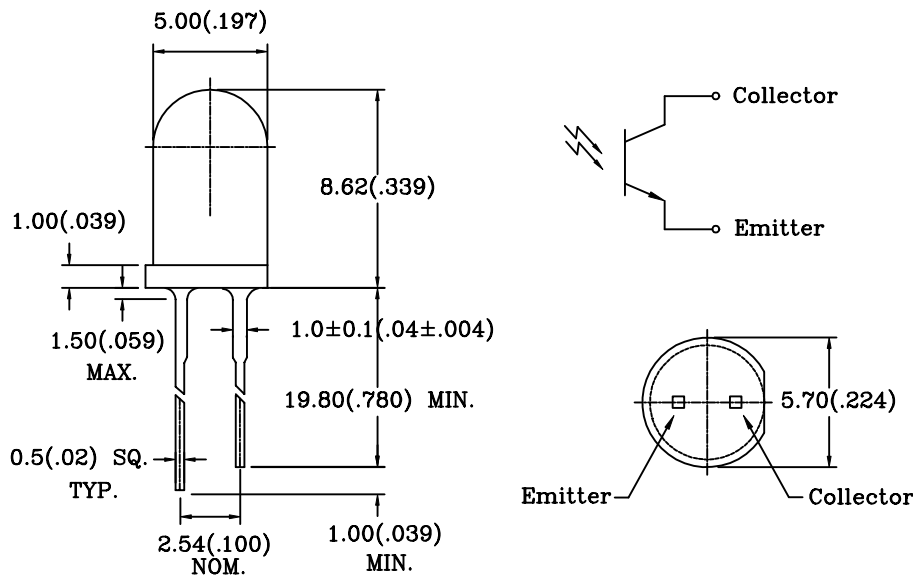
- Remote Control
- Smoke Detector
- Automatic Control System
- PC Mouse
- Optical Encoder

●ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

- Collector-to-Emitter Saturation Voltage Vce (SAT) (Max.) 0.5V
- Emitter-to-Collector Breakdown Voltage (VBR) (Min.) 5V
- Operating Temperature Range -45°C ~ +100°C
- Storage Temperature Range -45°C ~ +100°C
- Lead Soldering Temperature (1/16 inch from case) 5sec 250°C
- Relative Humidity at 85°C 85%
- Power Dissipation 100mW
- Rise Time/Fall Time Tr/Tf (Vcc=30V、Ic=800uA、rl=1k Ω) 10/15uS

●ELECTRICAL AND OPTICAL CHARACTERISTICS (Ta=25°C)

Absolute Maximum Rating			Collector Light Current (IC(ON))				Collector Dark Current (ICEO)		Viewing Angle 2 θ 1/2 (deg)	Peak Wave Length λ P (nm)
Vceo (V)	Pd (mW)	Topr (°C)	Min. (mA)	Typ. (mA)	Vce (V)	H (mW/cm ²)	Max (nA)	Vce (V)		
30	100	-45°C ~ +100°C	1.0	4.0	5	1.0	100	10	35	940



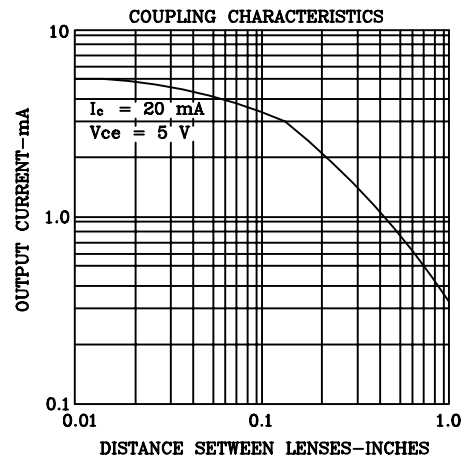
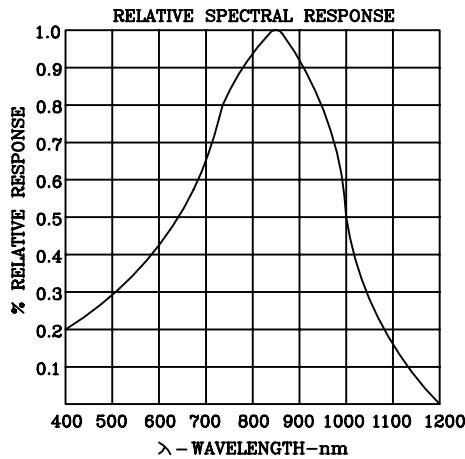
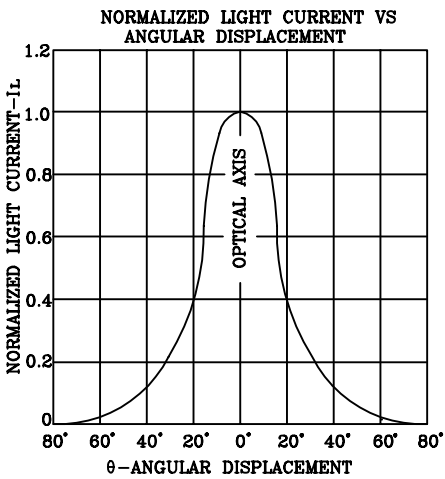
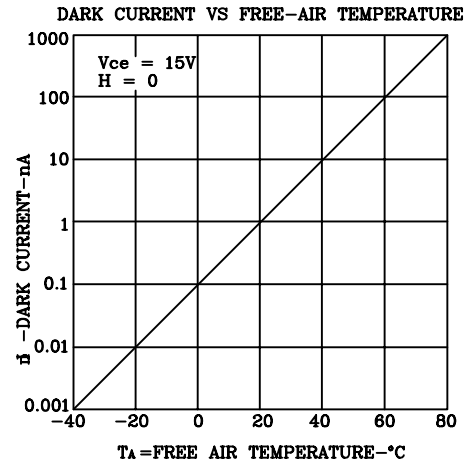
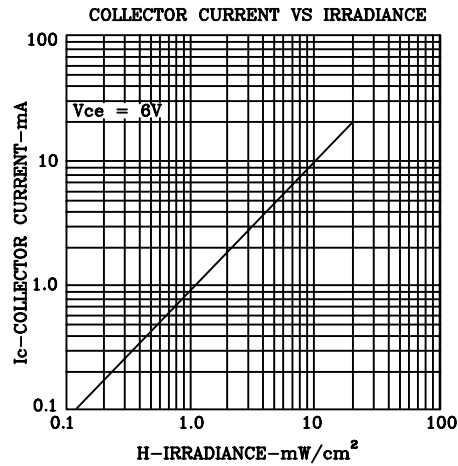
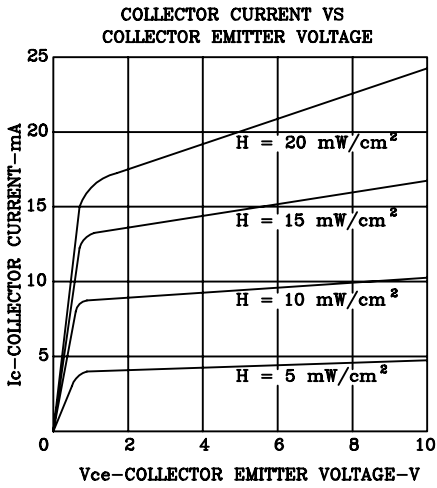
- NOTES: 1.All dimensions are in millimeters (inches).
 2.Tolerance is \pm 0.5mm unless otherwise specified.
 3.Lead spacing is measured where the leads emerge from the package.
 4.Specifications are subject to change without notice.

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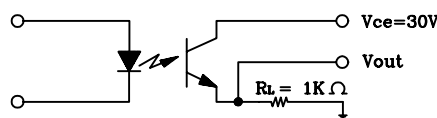


DEVICE NUMBER: BPT-BP0914

TYPICAL CHARACTERISTICS



SWITCHING TIME TEST CIRCUIT



NOTE 1: INPUT IRRADIANCE IS SUPPLIED BY A PULSED GALLIUM ARSENIDE TIGHT EMITTING DIODE WITH A RISE TIME OF LESS THAN 500ns. INCIDENT IRRADIATION IS ADJUSTED FOR SPECIFIED IL.

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RELIABILITY TEST

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REVISION: 1.0

Classification	Test Item	Reference Standard	Test Conditions	Result
Endurance Test	High Temperature High Humidity Storage	MIL-STD-202:103B JIS C 7021 :B-11	Ta=85°C±5°C RH=90%-95% Test time=1,000hrs	0/100
	High Temperature Storage	MIL-STD-883:1008 JIS C 7021 :B-10	High Ta=85°C±5°C Test time=1,000hrs	0/100
	Low Temperature Storage	JIS-C-7021 :B-12	Low Ta=-35°C±5°C Test time=1,000hrs	0/100
Environmental Test	Temperature Cycling	MIL-STD-202:107D MIL-STD-750:1051 MIL-STD-883:1010 JIS C 7021 :A-4	-35°C ~ 25°C ~ 85°C ~ 25°C 30min 5min 30min 5min Test Time=10cycle	0/100
	Thermal Shock	MIL-STD-202:107D MIL-STD-750:1051 MIL-STD-883:1011	85°C±5°C ~ -35°C±5°C 10min 10min Test Time=10cycle	0/100
	Solder Resistance	MIL-STD-202:201A MIL-STD-750:2031 JIS C 7021 :A-1	T.sol=260±5°C Dwell Time=10±1sec.	0/50
	Solderability	MIL-STD-202:208D MIL-STD-750:2026 MIL-STD-883:2003 JIS C 7021 :A-2	T.sol=230±5°C Dwell Time=5±1sec.	0/50
	Lead Bending Stress	MIL-STD-750:2036 JIS C 7021 :A-11	0°~90°~0°bend , 3 cycles Weight 250g	0/50

JUDGMENT CRITERIA OF FAILURE FOR THE RELIABILITY

Measuring items	Symbol	Measuring conditions	Judgement criteria for failure
Absolute Maximum Rating	Vceo		<30v
Collector Light Current	Ic (ON)	Vce=5v	>5mA
Rise Time & Fall Time	Tr	Tr = 10us	
	Tf	Tf = 15us	

Note: 1.U means the upper limit of specified characteristics. S means initial value.

2.Measurement shall be taken between 2 hours and after the test pieces have been returned to normal ambient conditions after completion of each test.