

Part Number: AM4457P3C

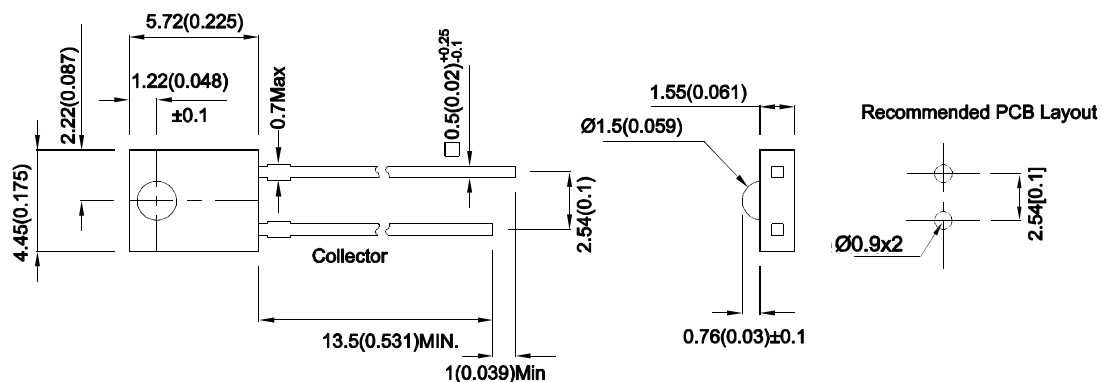
Features

- Mechanically and spectrally matched to infrared emitting LED lamp.
- RoHS compliant.

Description

Made with NPN silicon phototransistor chips.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25(0.01)$ unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.



Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Min.	Typ.	Max.	Units	Test Conditions
V _{BR CEO}	Collector-to-Emitter Breakdown Voltage	30			V	I _C =100uA E _e =0mW/cm ²
V _{BR ECO}	Emitter-to-Collector Breakdown Voltage	5			V	I _E =100uA E _e =0mW/cm ²
V _{CE (SAT)}	Collector-to-Emitter Saturation Voltage			0.8	V	I _C =2mA E _e =20mW/cm ²
I _{CEO}	Collector Dark Current			100	nA	V _{CE} =10V E _e =0mW/cm ²
T _R	Rise Time (10% to 90%)		15		us	V _{CE} = 5V I _C =1mA R _L =1000Ω
T _F	Fall Time (90% to 10%)		15		us	
I _(ON)	On State Collector Current	0.35	0.8		mA	V _{CE} = 5V E _e =1mW/cm ² λ=940nm
λ _{0.1}	Range of spectral bandwidth	420		1120	nm	
λ _p	Wavelength of peak sensitivity		940		nm	
2θ _{1/2}	Angle of half sensitivity		70		deg	

Absolute Maximum Ratings at TA=25°C

Parameter	Max.Ratings
Collector-to-Emitter Voltage	30V
Emitter-to-Collector Voltage	5V
Power Dissipation at (or below) 25°C Free Air Temperature	100mW
Operating Temperature	-40°C To +85°C
Storage Temperature	-40°C To +85°C
Lead Soldering Temperature (>5mm for 5sec)	260°C

Note:

1. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.

Typical Electro-Optical Characteristics Curves

Fig.1 Collector Power Dissipation vs. Ambient Temperature

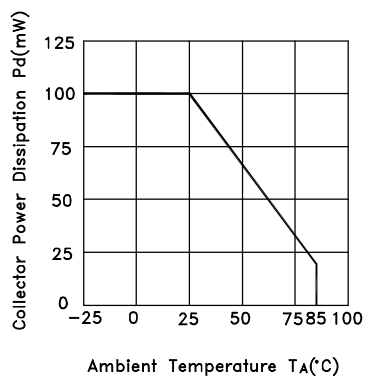


Fig.2 Spectral Sensitivity vs. Wavelength

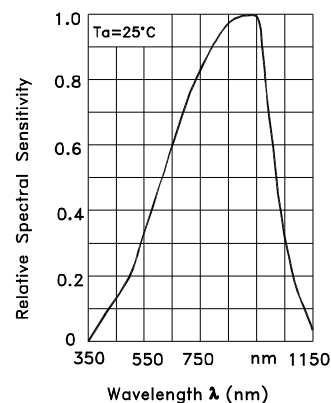


Fig.3 Relative Collector Current vs. Ambient Temperature

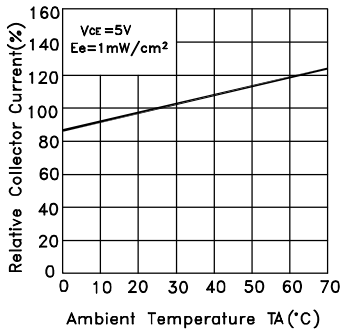


Fig.5 Collector Dark Current vs. Ambient Temperature

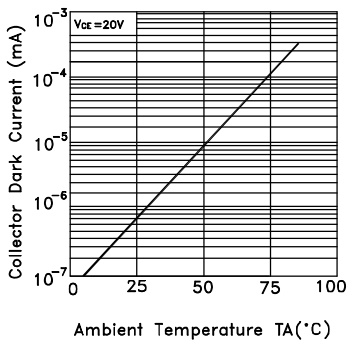


Fig.7 Response Time vs. Load Resistance

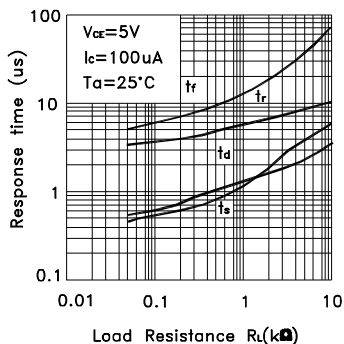


Fig.4 Collector Current
 $I_C = f(E_e), V_{CE} = 5\text{V}, T_A = 25^{\circ}\text{C}$

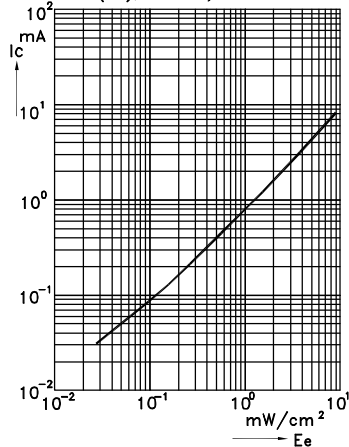
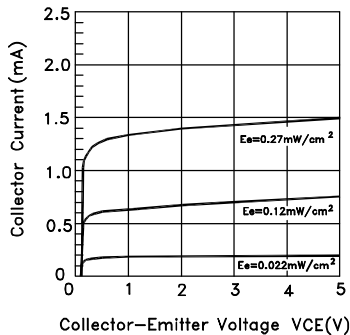
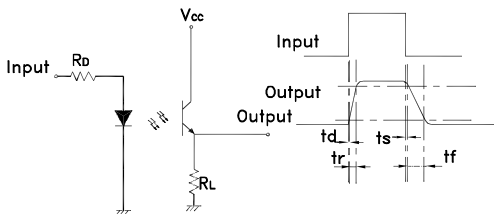


Fig.6 Collector Current vs. Collector-Emitter Voltage

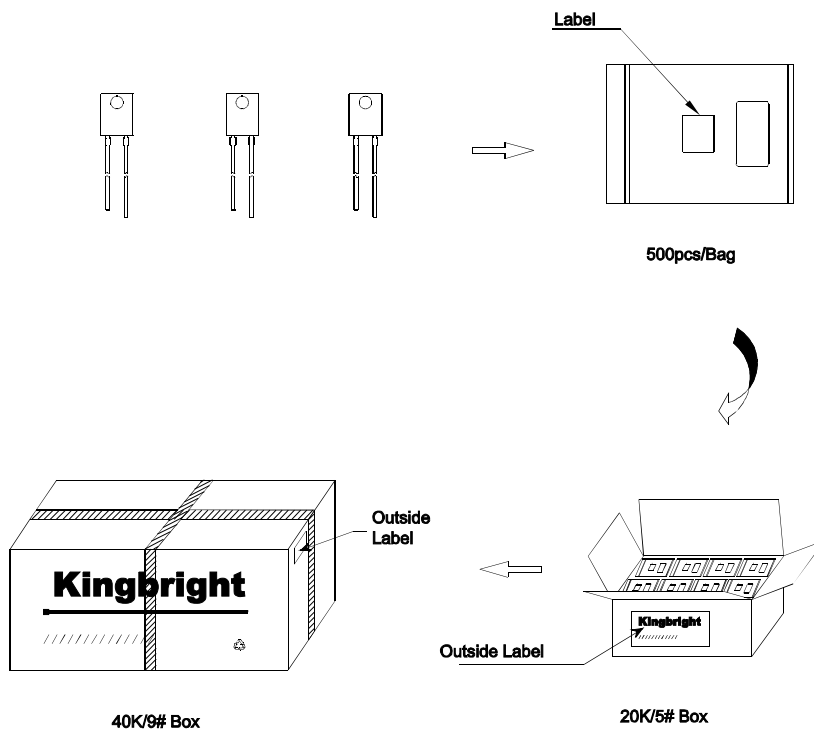



Test Circuit for Response Time



PACKING & LABEL SPECIFICATIONS

AM4457P3C



Kingbright		
P/NO: AM4457xxx		
QTY: 500 pcs	Q.C.	Q C xxx-xxx-xxxx PASSED
S/N: XXXX		
CODE: XXX		
LOT NO:		
		
RoHS Compliant		

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