

66285

PHOTOTRANSISTOR SURFACE MOUNT OPTOCOUPLER



04/26/06

Features:

- Small size saves real estate
- Pick and place compatible
- Military temperature range
- Solderable construction and terminations

Applications:

- Eliminate ground loops
- Level shifting
- Line receiver
- Switching power supplies
- Motor control
- Pulse transformer replacement

DESCRIPTION

The **66285** is designed to be used with both epoxy-based surface mounting and reflow solder mounting techniques. State-of-the-art optocoupler technology is utilized. A high efficiency infrared LED is coupled to a light-sensitive silicon phototransistor. This device is ideal for automated assembly in pick-and-place applications.

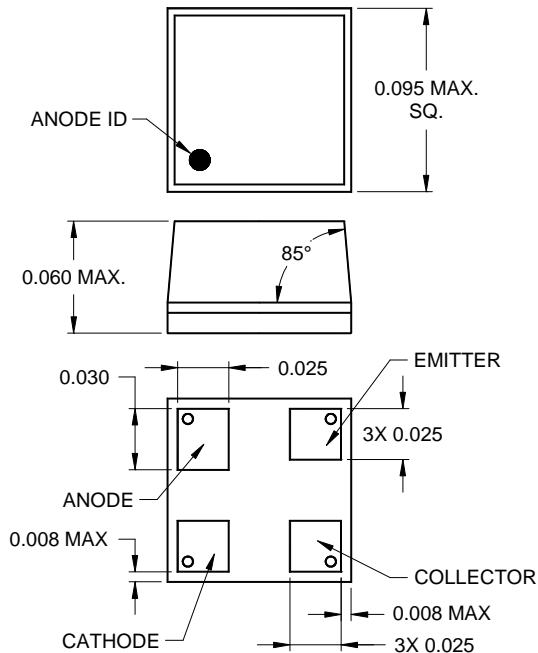
ABSOLUTE MAXIMUM RATINGS

Input to Output Isolation Voltage	+1kVdc
Collector-Emitter Voltage35V
Reverse Input Voltage2V
Input Diode Continuous Forward Current at (or below) 65°C Free-Air Temperature (see note 1)	50mA
Storage Temperature	-65°C to +150°C
Operating Free-Air Temperature Range.....	-55°C to +125°C
Lead Solder Temperature.....	245°C

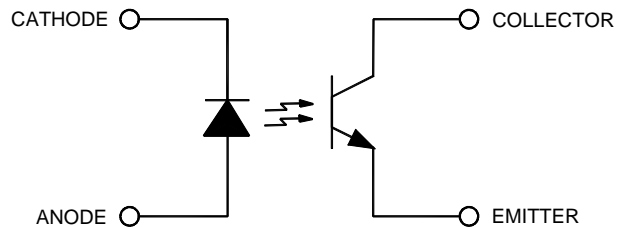
Notes:

1. Derate linearly to 125°C free-air temperature at the rate of 0.4 mW/°C above 65°C.

Package Dimensions



Schematic Diagram



ELECTRICAL CHARACTERISTICST_A = 25°C unless otherwise specified.

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Input diode Static Reverse Current	I _R			100	μA	V _R = 2V
Input Diode Static Reverse Voltage	V _R	2			V	I _R = 10μA
Input Diode Static Forward Voltage	V _F			1.6	V	I _F = 20mA

OUTPUT TRANSISTORT_A = 25°C unless otherwise specified.

Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	35			V	I _C = 1mA, I _B = 0, I _F = 0
-------------------------------------	----------------------	----	--	--	---	--

COUPLED CHARACTERISTICST_A = 25°C unless otherwise specified.

Current Transfer Ratio	-X01	CTR	50			%	V _{CE} = 5V, I _F = 10mA
T _a = +25°C	-X02		200				
Off State Collector Current		I _{C(OFF)}			50	nA	V _{CE} = 20V, I _F = 0mA
Collector-Emitter Saturation Voltage	-X01	V _{CE(SAT)}			0.3	V	I _F = 20mA, I _C = 10mA, I _B = 0
	-X02	V _{CE(SAT)}			0.3	V	
Rise Time	-X01	t _r		10		μs	V _{CC} = 10V, I _F = 5mA, R _L = 100Ω
or		or		10			
Fall Time	-X02	t _f		10			

NOTES:

- The -001 and -002 are 100% tested at 25°C only.
- The -101 and -102 are 100% are sample tested at temperature extremes.
- Custom electrical specifications are available.

RECOMMENDED OPERATING CONDITIONS:

PARAMETER	SYMBOL	MIN	MAX	UNITS
Input Current, Low Level	I _{FL}	0	100	μA
Input Current, High Level	I _{FH}	1	20	mA
Supply Voltage	V _{CC}	5.0	20	V
Operating Temperature	T _A	-55	125	°C