

66285**PHOTOTRANSISTOR SURFACE MOUNT
OPTOCOUPLER**

11-28-2017

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

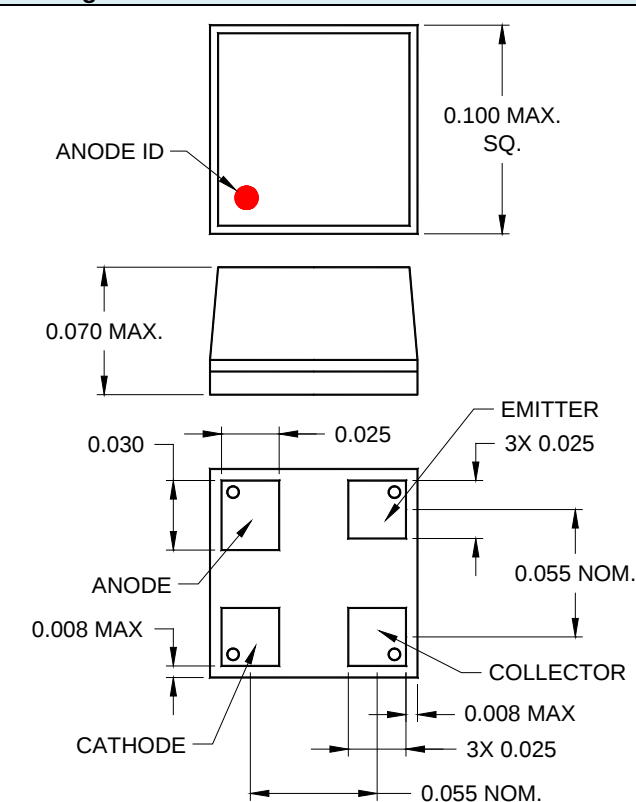
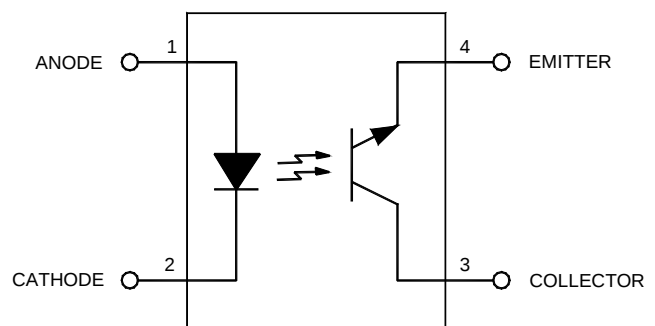
The **66285** is designed to be used with both epoxy-based surface mounting and reflow solder mounting techniques. State-of-the-Art optocoupler technology is utilized. A high efficiency infrared LED is coupled to a light-sensitive silicon phototransistor. This device is ideal for automated assembly in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

ABSOLUTE MAXIMUM RATINGS

Input to Output Isolation Voltage	+1kVdc
Collector-Emitter Voltage.....	35V
Reverse Input Voltage	2V
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**

Micropac Industries cannot assume any responsibility for any circuits shown or represent that they are free from patent infringement. Micropac reserves the right to make changes at any time in order to improve design and to supply the best product possible.

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ELECTRICAL CHARACTERISTICS $T_A = 25^\circ\text{C}$ unless otherwise specified.

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Input diode Static Reverse Current	I_R			100	μA	$V_R = 2\text{V}$
Input Diode Static Reverse Voltage	V_R	2			V	$I_R = 10\mu\text{A}$
Input Diode Static Forward Voltage	V_F			1.6	V	$I_F = 20\text{mA}$

OUTPUT TRANSISTOR $T_A = 25^\circ\text{C}$ unless otherwise specified.

Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	35			V	$I_C = 1\text{mA}, I_B = 0, I_F = 0$
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COUPLED CHARACTERISTICS $T_A = 25^\circ\text{C}$ unless otherwise specified.

Current Transfer Ratio $T_a = +25^\circ\text{C}$	-X01 -X02	CTR	50 200			%	$V_{CE} = 5\text{V}, I_F = 10\text{mA}$
Off State Collector Current		$I_{C(OFF)}$			50	nA	$V_{CE} = 20\text{V}, I_F = 0\text{mA}$
Collector-Emitter Saturation Voltage	-X01 -X02	$V_{CE(SAT)}$ $V_{CE(SAT)}$			0.3 0.3	V V	$I_F = 20\text{mA}, I_C = 10\text{mA}, I_B = 0$
Rise Time or Fall Time	-X01 -X02	t_r or t_f		10 10		μs	$V_{CC} = 10\text{V}, I_F = 5\text{mA}, R_L = 100\Omega$

NOTES:

1. The -001 and -002 are 100% tested at 25°C only.
2. The -101 and -102 are 100% tested at 25°C and sample tested at temperature extremes.
3. 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	$^\circ\text{C}$

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