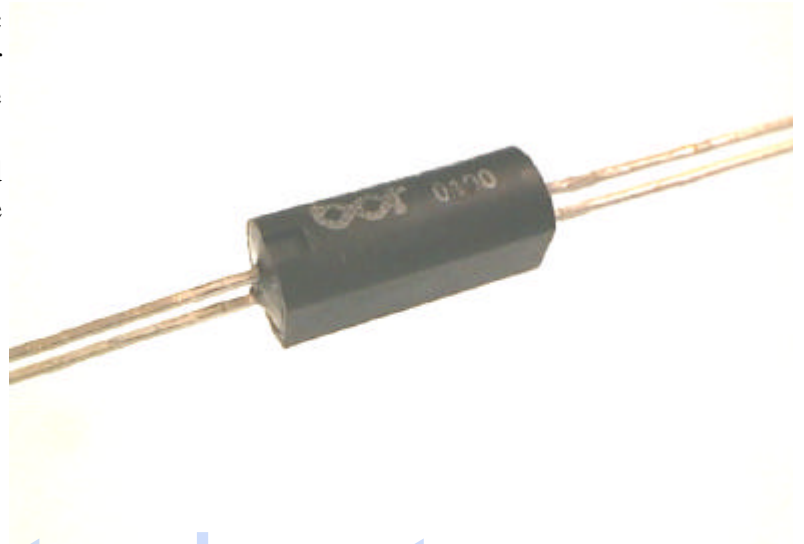


# SSI8900 Series Optically Coupled Isolators BASEEFA CERTIFIED

The SSI8901/2/3/10 are a family of optically coupled isolators, each consisting of a near infrared light emitting diode, coupled to an NPN silicon phototransistor sealed in an injection moulded plastic housing. This series is designed for applications requiring high voltage isolation between input and output.

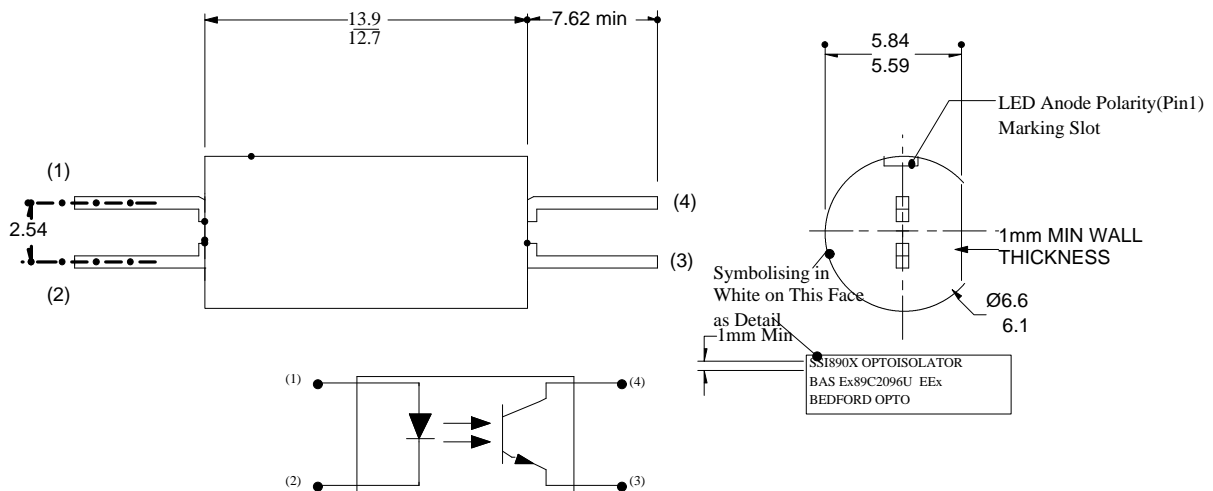
All electrical parameters are 100% tested by manufacturing. Specifications are guaranteed to a 0.65% AQL

- 10KV electrical rating
- High current transfer ratio-100% min@ 1m
- BASEEFA Certified



## MECHANICAL DATA

Searchdatasheet.com



**BEDFORD OPTO TECHNOLOGY LTD**  
**LINDSAYLANDS, BIGGAR, LANARKSHIRE ML12 6NR**  
Tel: +44 (0) 1899 221221 Fax: +44 (0) 1899 221009  
Website: bot.co.uk E-mail: bill@bot.co.uk

**ABSOLUTE MAXIMUM RATINGS** (25 °C unless otherwise noted)**SSI8900**

<b>INPUT DIODE</b> FORWARD DC CURRENT REVERSE DC VOLTAGE POWER DISSIPATION	<b>50mA (3)</b> <b>2V</b> <b>100mW (4)</b>
<b>OUTPUT PHOTOTRANSISTOR</b> COLLECTOR-EMITTER VOLTAGE EMITTER-COLLECTOR VOLTAGE POWER DISSIPATION	<b>30 V</b> <b>5 V</b> <b>100 mW (5)</b>
<b>OPERATING TEMP</b>	<b>-40°C TO +85°C</b>
<b>STORAGE TEMP</b>	<b>-40°C TO +85°C</b>
<b>INPUT-TO-OUTPUT ISOLATION VOLTAGE</b>	<b>+10KV DC (1)</b>
<b>LEAD SOLDERING TEMP (2) 1.6mm from case for 5sec with soldering iron</b>	<b>240°C</b>

## NOTES

- 1 Measured with input diode leads shorted together and output leads shorted together.
- 2 RMA Flux is recommended. Duration can be extended to 10 sec. max. when flow soldering.
- 3 Derate linearly 0.73 mA/°C above 25°C
- 4 Derate linearly 1.67 mW/°C above 25°C
- 5 Derate linearly 1.67 mW/°C above 25°C

Whilst the devices are capable of operating continually at the noted elevated temperatures users should be aware of the possibility of a reduction in CTR over long periods at high temperatures & currents.

**BASEEFA CERTIFIED**

BAS No. Ex89C2096UEExiaIIC

BOT'S RANGE OF BASEEFA OPTO COUPLERS  
ARE

OPI110 SERIES

OPI1264 SERIES

OPI1000 SERIES SURFACE MOUNT

OPI1000L SERIES LOW PROFILE SURFACE MOUNT

SURFACE MOUNT TAPED AND REELED

1mA If CTR TYPES IN ALL FAMILIES

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**OPTO ELECTRONIC DATA** ( $T_A = 25^{\circ}\text{C}$ )

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDIS- TIONS
<b>INPUT DIODE</b>						
Forward Voltage	$V_F$			1.5	V	$I_f = 20\text{mA}$
Reverse Current	$I_R$			100	$\mu\text{A}$	$V_r = 2\text{V}$
<b>OUTPUT PHOTOTRANSISTOR</b>						
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	30			V	$I_c = 1\text{mA}$ $I_f = 0$
Emitter-Collector Breakdown Voltage	$V_{(BR)ECO}$	5			V	$I_e = 100\mu\text{A}$
Collector-Emitter Dark Current	$I_{CEO}$			100	nA	$V_{ce} = 10\text{V}$
<b>COUPLED CHARACTERISTICS</b>						
DC Current transfer ratio	$I_c/I_f$					
SSI8901		25			%	$I_f=10\text{mA}$ , $V_{ce}=5\text{V}$
SSI8902		50			%	$I_f=10\text{mA}$ , $V_{ce}=5\text{V}$
SSI8903		100			%	$I_f=10\text{mA}$ , $V_{ce}=5\text{V}$
SSI8910		100			%	$I_f=1\text{mA}$ , $V_{ce}=5\text{V}$
Isolation Voltage	$V_{ISO}$	10			KV	See Note
Collector-emitter saturation voltage	$V_{CE(SAT)}$			0.4	V	$I_f=10\text{mA}$ , $I_c=1.6\text{mA}$
Turn-on time	$t_{on}$		5		$\mu\text{S}$	$I_c=10\text{mA}$ , $V_{cc}=10\text{V}$ , $R_L=100\text{ohm}$
Turn-off time	$t_{off}$		5		$\mu\text{S}$	$I_c=10\text{mA}$ , $V_{cc}=10\text{V}$ , $R_L=100\text{ohm}$

## NOTE:

Measured with input diode leads shorted together and output leads shorted together.  
(Sample testing only).

## OPTO ELECTRONIC SOLUTIONS

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