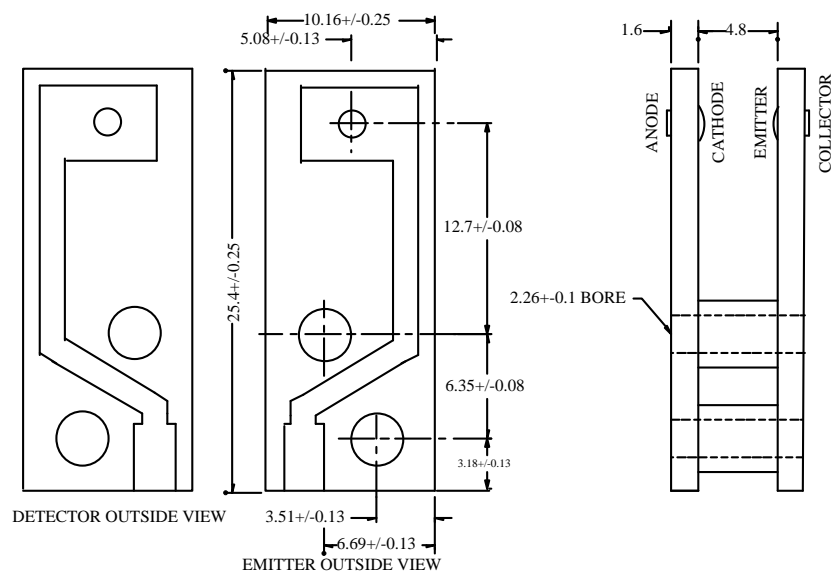


# SDA20 Series Optically Coupled Module

- Readily mounted PCB's containing a Silicon Light Sensor & matched Gallium Arsenide Light Source.
- Available as separate PCB's or complete Module.
- 125 deg C operation with hermetic components



## MECHANICAL DATA



**BEDFORD OPTO TECHNOLOGY LTD**  
**1,BIGGAR BUSINESS PARK, BIGGAR,LANARKSHIRE ML12 6FX**  
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)

<b>PHOTOTRANSISTOR</b>	
COLLECTOR-EMITTER VOLTAGE	25V
EMITTER-COLLECTOR VOLTAGE	5V
STORAGE TEMP RANGE	-65 °C to +150°C
OPERATING TEMP RANGE	-65°C to +125°C
SOLDERING TEMPERATURE (5 sec)	260°C
POWER DISSIPATION	50mW
LINEAR DERATING ABOVE 25°C	0.5mW/°C
CONTINUOUS COLLECT CURRENT	50mA
<b>I.R. EMITTER</b>	
REVERSE VOLTAGE	2.0V
CONTINUOUS FORWARD CURRENT	100mA
PEAK FORWARD CURRENT (2u Secs Tp 0.1% Duty Cycle)	1.0A
STORAGE TEMPRANGE	-65°C to +150°C
OPERATING TEMP RANGE	-65°C to +125°C
SOLDERING TEMPATURE (5sec)	260°C
POWER DISSIPATION	150mW
LINEAR DERATING ABOVE 25°C	1.5mW/°C

**NOTES**

- 1 RMS flux is recommended
- 2 Ee (ADT) is measured using a 0787mm diam apertured sensor place 12.7mm from the measuring surface.
- 3 Light source is an unfiltered Tungston bulb operating @ 2870 K Colour Temperature or equivalent I.R. source.

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**ELECTRICAL CHARACTERISTICS** at 25°C

PARAMETER	TEST CONDI-TION	SDA20	SDA20/1	SDA20/2	LSA20S	LSA20E	UNITS
<b>I.R.EMITTER</b>							
RADIANT POWER DEN-SITY	If = 50 mA	—	—	—	—	1.0min	mW/cm <sup>2</sup> (2)
FORWARD VOLTAGE	If = 50 mA	—	—	—	—	1.5max	Volts
REVERSE LEAKAGE	VR = 2.0 V	—	—	—	—	100 max	μA
PEAK WAVE-LENGTH	If = 50 mA	—	—	—	—	935 typ	nm
1/2 POWER EMISSION AN-GLE	If = 50 mA	—	—	—	—	24 typ	degrees
<b>PHOTO TRANSISTOR</b>							
ON STATE COLLECTOR CURRENT	Vce = 5V Ee = 20mW/cm (3)	—	—	—	4.0min 8.0max	—	mA
COLLECTOR DARK CUR-RENT	Vce – 10V Ec = 0	100max	100max	100max	100max	—	nA
V(BR) CEO	Ic = 100uA	25min	25min	25min	25min	—	Volts
V(BR) ECO	Ie = 100uA	5min	5min	5min	5min	—	Volts
Vce (SAT)	I = 0.4mA Ee = 20mW/cm	0.4max	0.4max	0.4max	0.4max	—	Volts
Tr/Tf	Vce=5V Ic=0.8mA RL=1Kohm	15typ	15typ	15typ	15typ	—	μS
<b>COUPLED PAIR</b>							
Vce (SAT)	If = 35mA Ic = 200uA	—	0.75 max	—	—	—	Volts
Vec (SAT)	If = 35mA Ic = 2mA	—	—	0.75max	—	—	Volts
I c Min	Vce = 5V If=35mA	0.1	0.7	2.0	—	—	mA

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