

EXS8305-9810
High Bandwidth SLED
5 PIN BUTTERFLY Uncooled Module Specifications

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1. SCOPE

1.1 PURPOSE

The purpose of this document is to specify the electro-optical performance and dimensions of superluminescent light emitting diode (SLED) 5 pin module.

1.2 RESPONSIBILITY

EXALOS is responsible for establishing, implementing and maintaining this procedure. The Quality representative shall ensure that a timely Engineering Change Notice (ECN) is issued in accordance with EXALOS procedure for any changes of the applicable documents.

2. REFERENCE DOCUMENT

- EXS-WI-0001 Visual Inspection Criteria SLED Chip on Submount Procedure
- MIL STD 883 C method.
- Bellcore GR-468-CORE.

3. ELECTRO-OPTICAL PERFORMANCE ($T_{SLED} = 25^{\circ}C$)

Parameter	Symbol	Cond.	Min	Typ	Max	Unit
Operating Current	I_F		0		120	mA
Power in SMF	P_o	$I_{F,max}$	1.5	2.5		mW
Centre Wavelength	λ_c	$I_{F,max}$	800	820	840	nm
Bandwidth FWHM		$I_{F,max}$	20	25		nm
Spectral ripple [RB=0.1nm]		$I_{F,max}$		0.1	0.2	dB
Platinum PT1000 RTD Thermistor	R_{TH}	$0^{\circ}C$		1000		Ohms

4. ABSOLUTE MAXIMUM RATINGS

Stresses beyond the absolute maximum ratings may cause permanent damage to the device.

Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

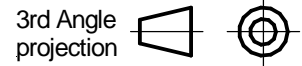
Parameter	Symbol	Cond.	Min	Max	Unit
Reverse voltage	V_R			-2	V
Forward voltage	V_F	$I_{s,max}$		2.6	V
Storage temperature	T_{stg}		-40	85	$^{\circ}C$
Operating temperature	T_{op}	$I_{s,max}$	-40	85	$^{\circ}C$
Storage humidity	<30 $^{\circ}C$ >30 $^{\circ}C$		5	95 85	% r.h. % r.h.
Lead soldering temperature				260	$^{\circ}C$
Lead soldering duration				10	s

ESD		human b.m		500	V
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5. SCREENING

The produced 830nm SLED Module is required to meet all operating conditions specified in Table 3, Electro-Optical Performance Specifications after being subjected to the following screening tests.

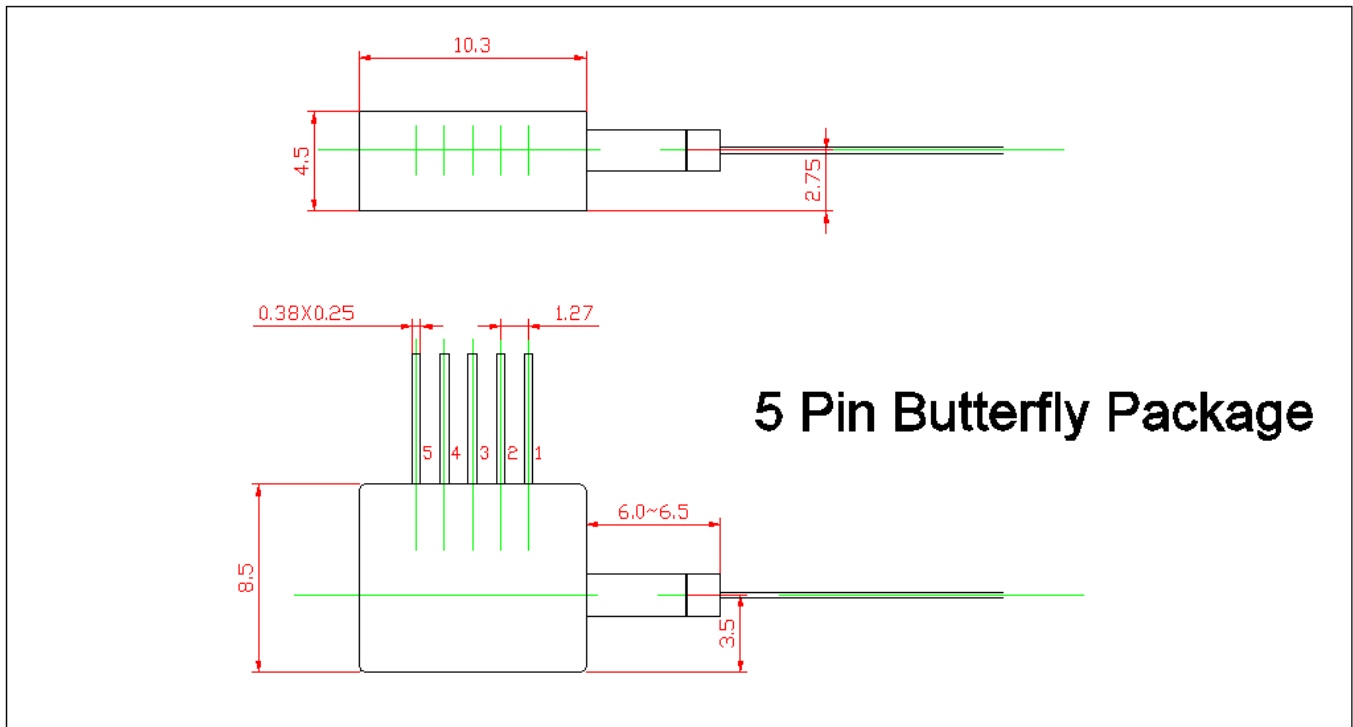
Test Item	Test Conditions	Reference
Seal	Fine: Condition A1 Gross: Condition C	MIL-STD-883, Method 1014
Temperature Cycling	-40°C to +85°C, ramp rate $\leq 5^\circ\text{C}/\text{min}$ 10 cycles	MIL-STD-883, Method 1010



6. PACKAGE [mm]

Tolerances: .X ± 0.25 mm
.XX ± 0.05 mm

Dimensions in mm



Butterfly 5 pin	
Pin	Function
1	RTD Thermistor
2	RTD Thermistor
3	SLED Anode (+)
4	SLED Cathode (-)
5	Case

7. IMPORTANT NOTES

1. Avoid electrostatic discharges, which may destroy the SLED.
2. Never use the module without heat sinking.
3. Adequate eye protection against laser radiation should be used while handling and operating the module.
4. EXALOS declines any responsibility if the device is used in applications where human life may be endangered.
5. Back reflections may influence the output power and spectral characteristics of the SLED. The use of optical isolators and/or angled connectors is recommended. Back reflections of less than -30dB are recommended.

8. ORDERING INFORMATION

Please use the following code system to order products from EXALOS:

Standard product: The Standard product is **EXS8305-9810** but all the configurations defined below are available on special request.

