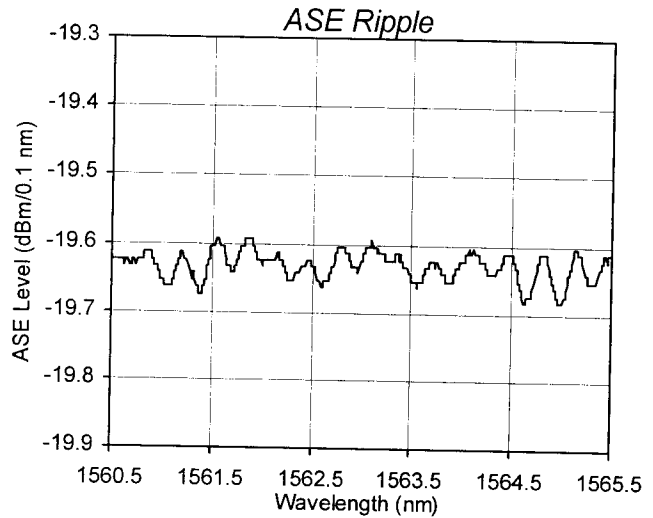
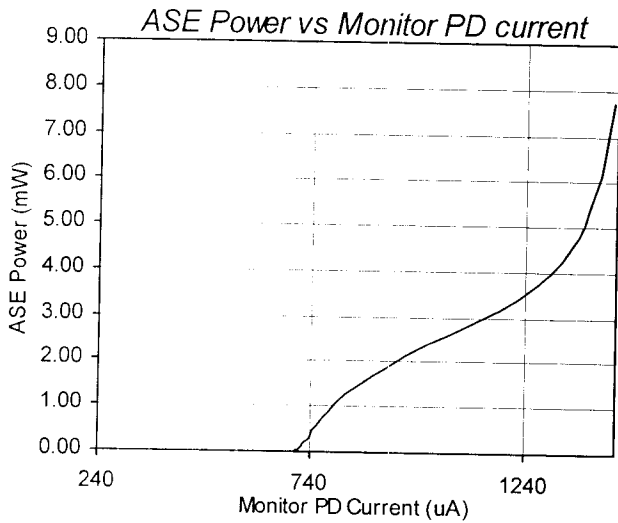
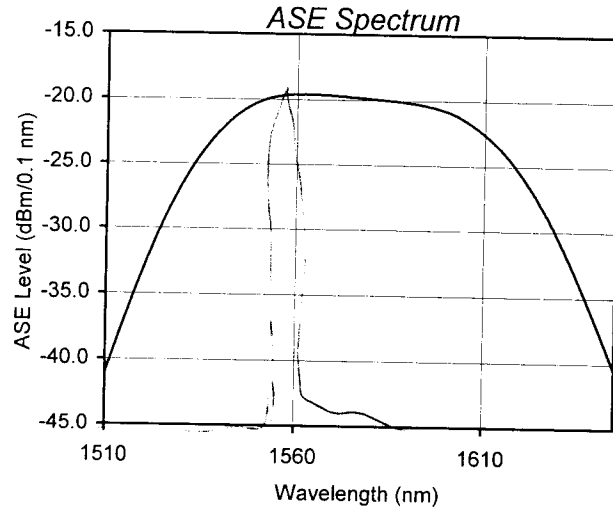
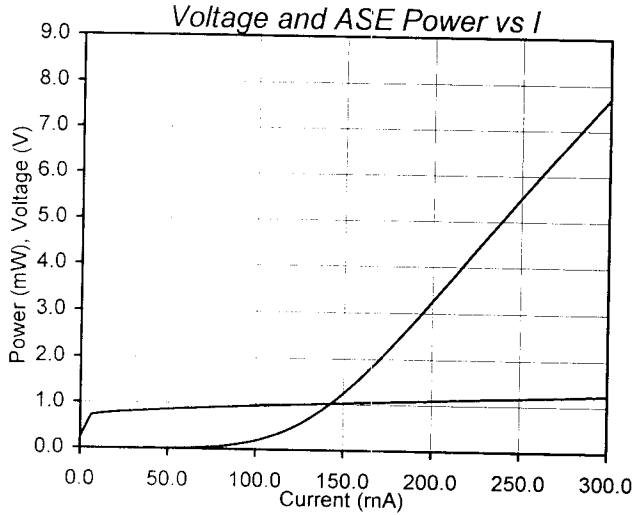


Measurement Report

EXS5810-2101 - SN: 18300



Max Power: 7.71 mW
 Peak Wavel.: 1563.0 nm
 Central Wavel.: 1574.2 nm
 BW: 70.7 nm
 ASE Ripple: 0.08 dB
 $V_f @ I_s$: 1.25V
 Monitor PD Current at Max Power: 1441.997 μ A

Date: 31.07.2007 Time: 10:00
 $T_{th} = 20.0 \text{ }^\circ\text{C}$, $T_{case} = 20.0 \text{ }^\circ\text{C}$
 $I_{TEC} = 0.18 \text{ A}$, $V_{TEC} = 0.21 \text{ V}$
 $I_s = 300.0 \text{ mA}$
 Test operator: EGO
 Test Program Rev.: 3.2, Prod. Mode

EXS5810-2xxx
High Power SLED
1580 nm
Butterfly Package

Revision : 1.0
Date : 18-10-2005
Confidentiality : **Confidential**

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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) Butterfly.

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.

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 ($T_{SLED} = 20^{\circ}C$)

Parameter	Symbol	Cond.	Min		Typ		Max	Unit
Operating Current	I_F		0				300	mA
Power in SMF or PMF*	P_o	$I_{F,max}$	7	6*	10	8*		mW
Center Wavelength	λ_c	$I_{F,max}$	1560		1580		1600	nm
Bandwith FWHM		$I_{F,max}$	60		70			nm
Spectral ripple [RB=0.1nm]		$I_{F,max}$			0.15		0.3	dB
Monitor Diode Current	I_{MPD}				1400 (#)			μA

(#)Measurement conditions:

- $I_F = I_F \text{ Max}$
- Monitor PD bias voltage: 0 Volts

Input resistance of the Monitor PD current measurement circuit = 125 Ohm

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.

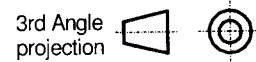
Parameter	Symbol	Cond.	Min	Max	Unit
Reverse voltage	V_R			-2	V
Forward voltage	V_F	$I_{F,max}$		2.5	V
Storage temperature	T_{stg}		-40	85	°C
Operating temperature	T_{op}	$I_{F,max}$	-20	65	°C
Storage humidity	<30°C		5	95	% r.h.
	>30°C			85	% r.h.
Thermoelectric cooler voltage	V_{tec}			2.5	V
Thermoelectric cooler current	I_{tec}			1.8	A
Thermistor Resistance	R_{th}	20°C	12.5		KΩ
Thermistor constant	B		3892		K
Lead soldering temperature				260	°C
Lead soldering duration				10	s
ESD		human b.m		500	V
Monitor diode reverse bias voltage	V_{Bias}		0	-2	V

5. SCREENING

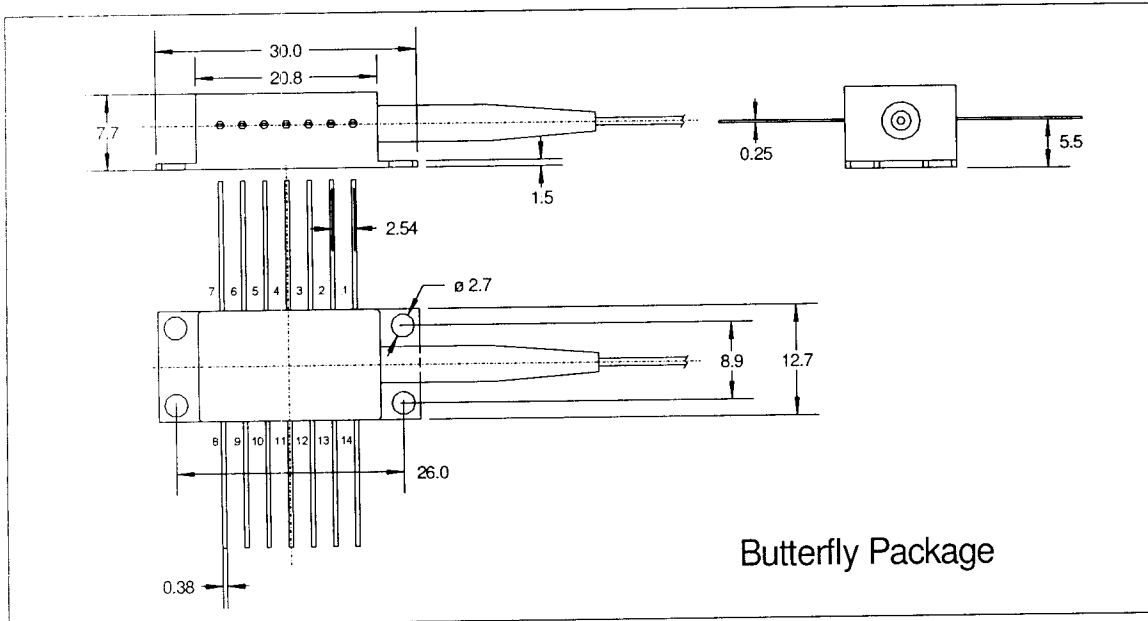
The produced 1580nm SLED Module is required to meet all operating conditions specified in Table 3. Electro-Optical Performance Specifications after being subjected to the following screening tests.

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 ≤ 5°C/min 10 cycles	MIL-STD-883, Method 1010

6. PACKAGE DIMENSIONS [mm]



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



Butterfly Package

Butterfly Package			
Pin	Function	Pin	Function
1	TEC (+)	8	NC
2	THERMISTOR <i>orange</i>	9	NC
3	MONITOR DIODE ANODE (Note 1) <i>grey</i>	10	SLED (+) <i>blue</i>
4	MONITOR DIODE CATHODE (Note 2) <i>violet</i>	11	SLED (-) (Note 2) <i>green</i>
5	THERMISTOR <i>red</i>	12	NC
6	NC	13	CASE GROUND
7	NC	14	TEC (-) <i>yellow</i>

Notes :

- Note 1 :Option Monitor Diode
- Note 2 :Pin # 4 and Pin # 11 are short-circuited

Attention

Prior to connecting the SLED module to the driver using constant power mode, make sure that your SLED driver supports the so-called "Common laser cathode/photodiode cathode" arrangement and the connections are set accordingly. If this is not the case do not connect the SLED, otherwise it may result in permanent damage to the SLED.

7. IMPORTANT NOTES

1. Avoid electrostatic discharges, which may destroy the SLED.
2. Never use the bare die 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 **EXS5810-2101** but all configurations defined below are available on special request.

