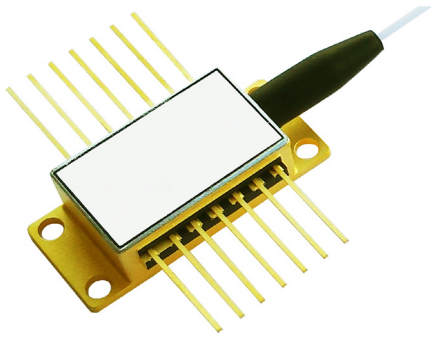


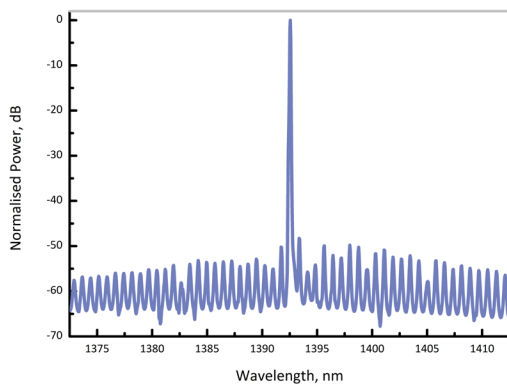
# 1392nm DM LASER

REP1392-DM-B

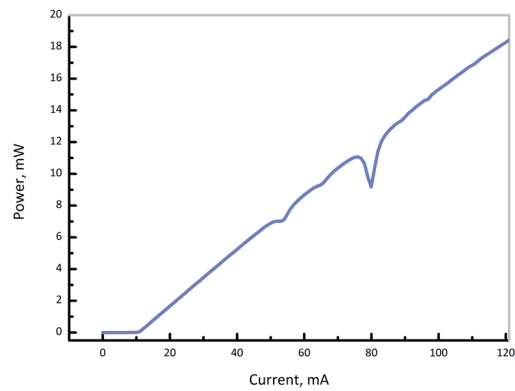


## PRECISION MOISTURE SENSING

RPMC Lasers REP1392-DM-B laser diode, available at a range of wavelengths from 1385 - 1400nm, is designed specifically for detection of H<sub>2</sub>O. RPMC's Discrete-Mode (DM) technology enables the de-sign of a cost effective device with mode-hop free tunability and ex-celent SMSR.



Typical optical spectrum at 25° C



Output power as a function of bias current

## ELECTRO-OPTICAL CHARACTERISTICS\* ( $T_{SUB} = 25^{\circ} C$ )

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT
Available Wavelength Range	$\lambda$	1385	1392.5	1400	nm
Wavelength Tolerance	$\lambda_{spec}$	$\lambda - 1$	$\lambda$	$\lambda + 1$	nm
Side Mode Supression Ratio	SMSR	30	40	-	dB
Threshold Current	$I_{th}$	-	15	20	mA
Output Power in fiber	$P_f$	5	8	12	mW
Optical linewidth	$\Delta f$	-	-	2	MHz
Temperature Tuning Coefficient	$T_{\lambda}$	0.07	0.1	-	nm/°C
Current Tuning Coefficient	$I_{\lambda}$	8	10	-	pm/mA
Slope Efficiency	SE	0.1	0.15	-	mW/mA
Thermistor Resistance	$R_T$	9.5	10	10.5	k $\Omega$
Thermistor Temp. Coefficient	C	-	-4.4	-	%/°C

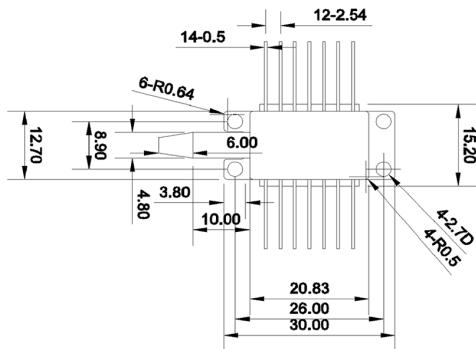
# ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	MIN	MAX	UNIT
Forward Current	$I_f$	-	120	mA
Forward Voltage	$V_f$	-	2	V
TEC Current	$I_{TEC}$	-	1.2	A
Reverse Voltage LD	$V_r$	-	2	V
Reverse Voltage PD	$V_{rev}$	-	20	V
Case Temperature*	$T_{Case}$	-20	65	°C
Chip Submount Temperature	$T_{Sub}$	0	50	°C
Storage Temperature	$T_{storage}$	-40	85	°C

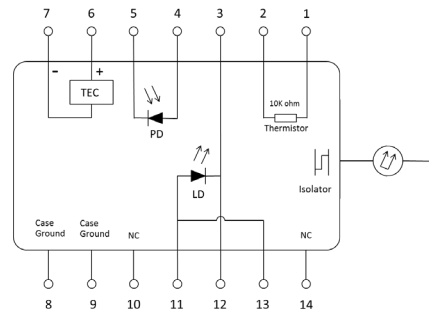
\*For  $T_{Sub} < 25^{\circ}\text{C}$ , Max Case Temperature should be derated to  $T_{Case,Max} = T_{Sub} + 40^{\circ}\text{C}$

## PACKAGING

The REP1392-DM-B product series is offered in a 14-pin But-terfly package - Inquire for other packaging options. The standard package pinout is shown below, variations may be requested.



14-pin butterfly schematic



Standard "Pinout 01" option



Wavelength Band

Single Mode

Connector/Fiber:  
FA = FC/APC (SMF)  
FM = FC/APC (PM)

Package Description:  
B = 14 pin butterfly  
01 = pinout



### Laser Safety

This is a Class 3R Laser Product as defined by International Standard IEC 60825-1, Edition 3. Invisible Laser radiation is emitted from the end of the fiber or connector. Avoid direct eye exposure to the beam. Laser safety labels are not attached to the module due to space limitations but instead are affixed to the outside of the shipping carton.