

## 1. Information on standard coolers (TEC).

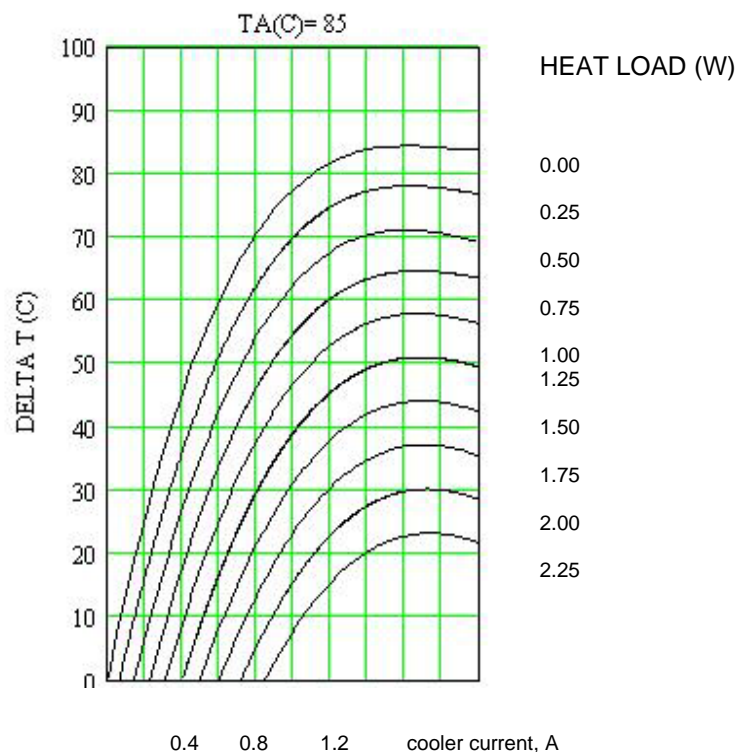
Example below shows typical performance of standard coolers integrated into all cooled SLD modules of Superlum.

It is seen that coolers provide excellent delta T, allowing stabilization of nominal operation temperatures +20/+25 degC up to +85 degC case T in some modules of Superlum Diodes. However it is very important to arrange proper heat dissipation from module carefully for its best performance. It is also important that if operation at highest possible temperature extreme is required, recommended type of package is butterfly (single-sided or double-sided) due to better heat dissipation from cooler.

Standard P/N of coolers is ott-23-1.3-28. On request, other types of coolers may be integrated into modules. Contact us for more details.

### TEC P/N ott-23-1.3-28. Typical performance @ T ambient = 85°C (one atmosphere dry nitrogen).

(Attention: maximum 1200 mA current is allowed by Superlum Diodes)



## 2. Types of fibers used in standard SLD modules of Superlum Diodes.

### *Singlemode (SM) isotropic fibers.*

**SLD-2XX** (680 nm band): 125 um cladding, 250 um jacket, 3.8 um mode size, 650 nm cutoff; domestic supplier;

**SLD-3XX** (780 – 860 nm band): Corning Puremode 780;

**SLD-4XX** (900-1060 nm band): Corning Puremode 780 (for central wavelength below 960 nm), or Corning Flexcore 1060;

**SLD-5XX, SLD7-XX**: Corning SMF-28, specially selected for cutoff < 1220 nm.

### ***Polarization maintain (PM) fibers***

As a standard, Superlum uses elliptically stressed inner cladding 125 um cladding/250 um jacket domestic fiber with appropriate cutoff wavelength (depending on SLD wavelength). Call us for more details about this fiber.

However, there are a lot of different types of PM fibers available, and there may be some problems to couple light from one PM fiber to other. Therefore, if you are already using some specific fiber in your system, or if you do know the type of fiber you will be using, we recommend to send this fiber to Superlum to pigtail modules by it. This will exclude any compatibility problem. Such option is not charged by Superlum Diodes.

### **3. Thermistors**

Superlum uses NTC thermistors 10K3CG2 from BetaTherm Ltd., Ireland, with 10 KOhm at +25 C and  $\beta=3892\pm 1\%$ .

### **PD monitors**

Some SLD modules of Superlum contain PD monitors. Monitors shall be supplied by -3V reverse voltage