

Optically Immersed 7.0 μm LED in heatsink optimized housing

LED70Sr/Cy

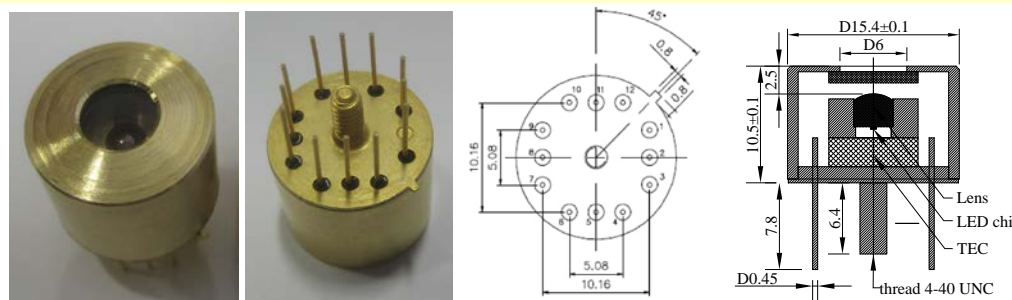
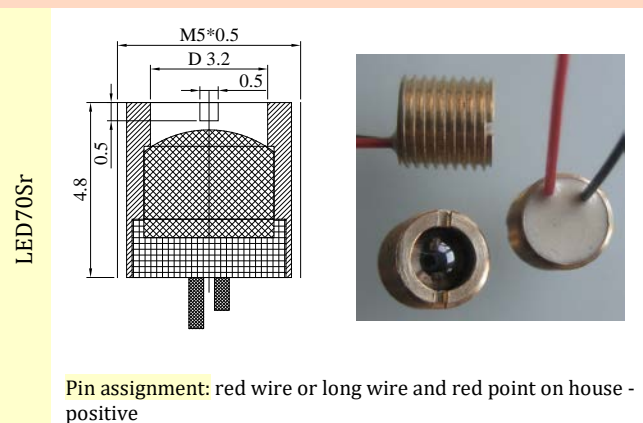
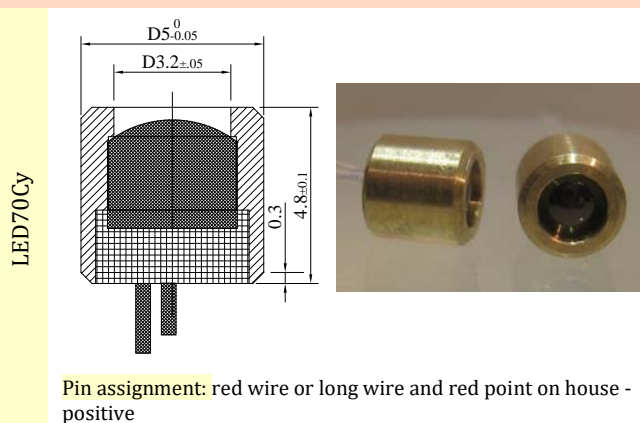
TE cooled Optically Immersed 7.0 μm LED

LED70T08TEC

Peak wavelength	μm	7.0 ± 0.2	@22 °C
Pulse power	μW	Drive current 1 A, 0.02 duty cycle	3÷3.5
Quasi-CW power	μW	Drive current 0.15 A, 0.5 duty cycle	0.5÷0.6
CW power	μW	Drive current 0.1 A	0.3÷0.4
Cut-off frequency	MHz	50	¹

Code	Emission size, mm	Weight, g	Optical components	Far-field pattern FWHM, deg.	Optical axis deviation, deg.	Optical power deviation in lot, %	Operation conditions, °C	Lifetime, hrs
LED70Sr/Cy		~0.4	Ge lens					
LED70T08TEC	∅ 3.2	~10	Ge lens and output CaF2 window D=6mm	~15	≤5	±25	-60÷+60	>100 000

Product view



Features

- Optical coupling through the use of chalcogenide glasses and Ge lenses with antireflection coating

- 3-fold increased LED output power;
- Beam collimation;
- Small on-off time (tenths of ns);
- Low power consumption (≤0.1 W)

Emission beam divergence is small and thus we recommend adjusting LED position regarding to the detector system before final evaluation/use of the devices. We recommend if possible using low duty cycle mode of operation with $I < 0.5 \times I_{max}$ so that higher efficiency and long term stability of a LED are achieved. Data are valid for LED **attached to a heatsink** and thermostabilized at 22°C. **Heatsink is essential for TEC operation!**

Notes

- ¹ - according to estimation
- ² - Customized headers and caps can be fabricated

Product specifications are subject to change without prior notice due to improvements or other reasons. Updated 29.06.20

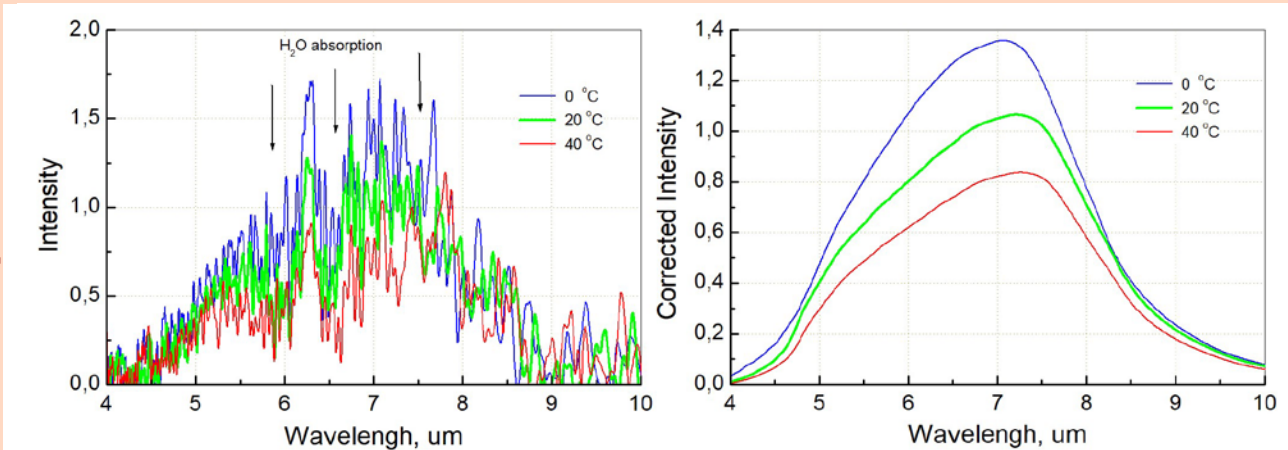


ООО «ИофФЕЛЭД»
 IoffeLED, Ltd

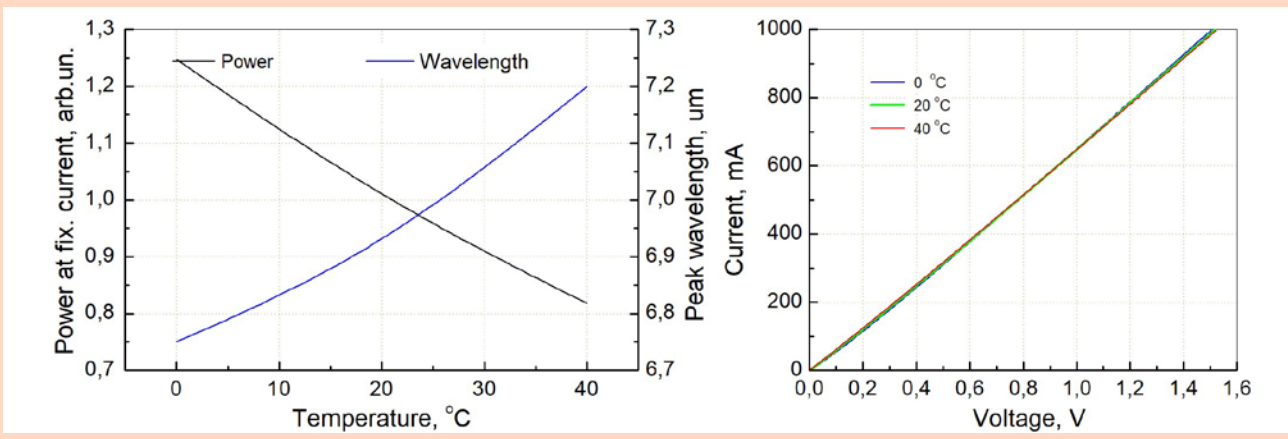
Politechnicheskaya 26,
 St.Petersburg, 194021, RUSSIA

<http://www.ioffeled.com>; e-mail: Mremennyy@mail.ioffe.ru
<http://www.mirdog.spb.ru>; e-mail: bmat@iropt3.ioffe.ru

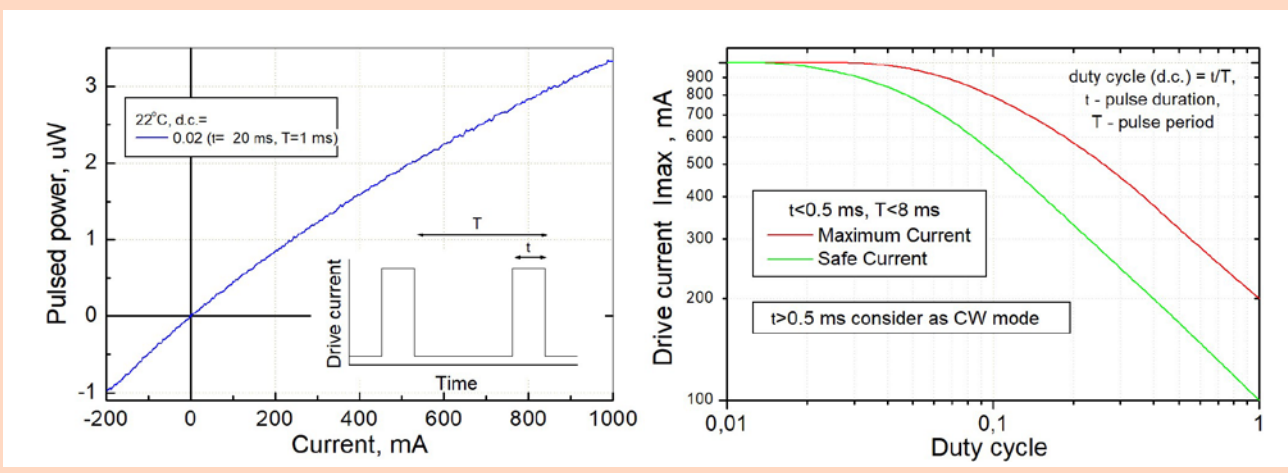
Measured and Corrected for H₂O absorption emission spectra



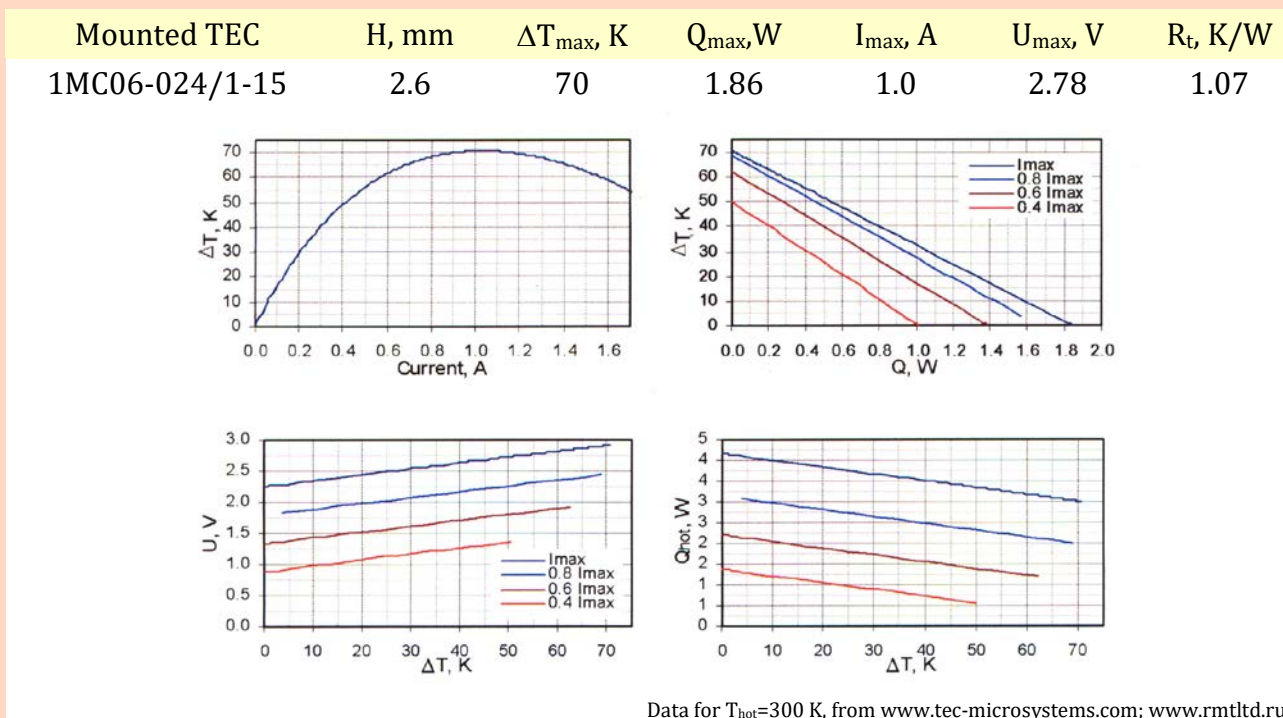
Power and peak wavelength vs. temperature; I - V curve



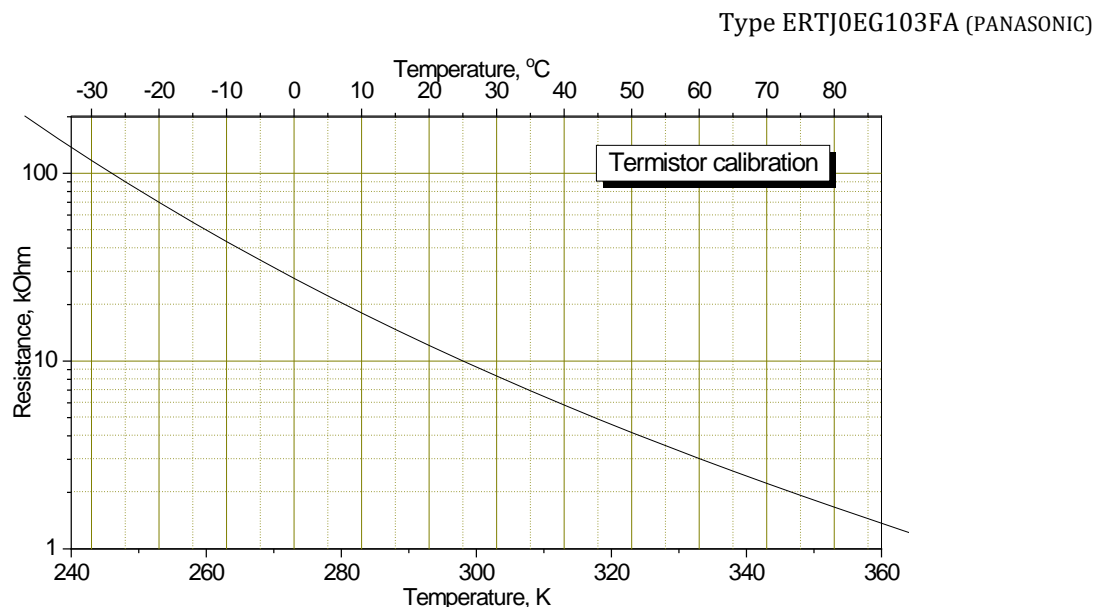
Output power and drive current vs operation conditions



Thermoelectric cooling module datasheet



Thermistor specification



Possible TEC heatsink view

