


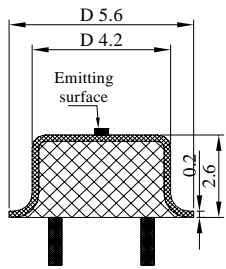
LED  $\lambda=3.8 \mu\text{m}$  in TO-18 housing

LED38TO18

T=22 °C	Without cap	Peak wavelength $\lambda_{\text{max}}$	$\mu\text{m}$	3.75÷3.85	
		Pulse power $P_{\text{pulsed}}$	mW	Drive current 1 A, 2 % duty cycle	$\geq 0.07$
		Quasi-CW power $P_{\text{QCW}}$	mW	Drive current 100 mA, 50% duty cycle	$\geq 0.02$
		CW power $P_{\text{CW}}$	mW	Drive current 50 mA	$\geq 0.01$
T=77 K	Without cap	Peak wavelength $\lambda_{\text{max}}$	$\mu\text{m}$	3.3÷3.4	
		Pulse power $P_{\text{pulsed}}$	mW	Drive current 1 A, 2 % duty cycle	$\geq 1$
		Quasi-CW power $P_{\text{QCW}}$	mW	Drive current 100 mA, 50% duty cycle	$\geq 0.25$
		CW power $P_{\text{CW}}$	mW	Drive current 50 mA	$\geq 0.14$


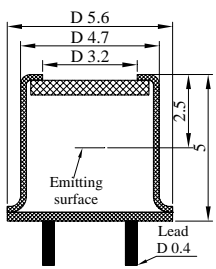
Model	Package	Cap with window	Emitting area, mm	Far Field FWHM, deg.	Operation conditions	Polarity
LED38TO18	TO18 (TO46)	-	0.25×0.25	140	77 ÷ 350 K	Short leg or key is negative
LED38TO18c	TO18 (TO46)	Sapphire		60	-25÷+60 °C	

Product view

LED38TO18

Product view

LED38TO18c

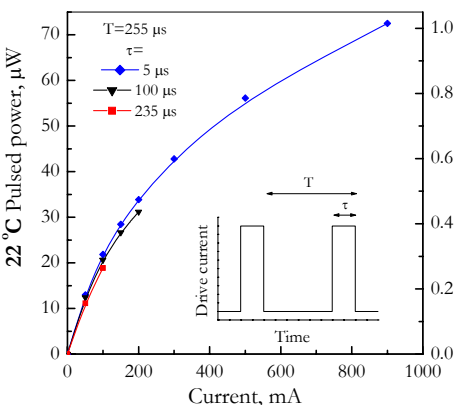
**Features**

Growth of narrow gap semiconductor alloys onto n<sup>+</sup>-InAs substrate; Flip-chip; Operation at 77 K (with no cap model)

Low serial resistance; Small on-off time (tenths of ns); Low power consumption ( $\leq 0.1 \text{ W}$ )

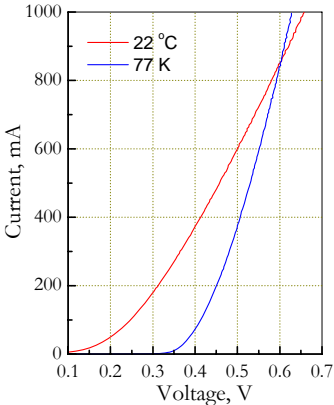
We recommend if possible using low duty cycle mode of operation with  $I < 0.5 \times I_{\text{max}}$  so that higher efficiency and long term stability of a LED are achieved.

L-I and I-V characteristics and emission spectra



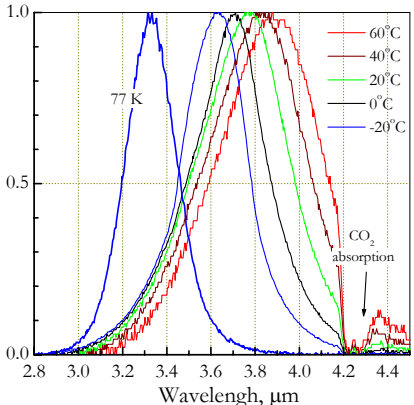
22 °C Pulsed power,  $\mu\text{W}$

Current, mA



77 K Pulsed power, mW

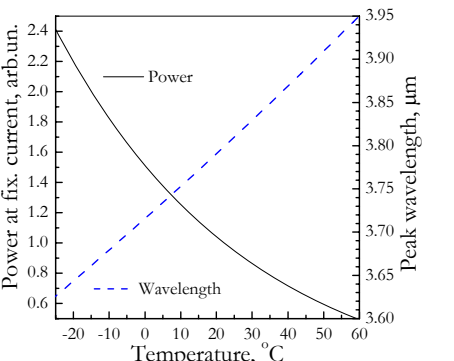
Current, mA



Normalized Intensity

Wavelength,  $\mu\text{m}$

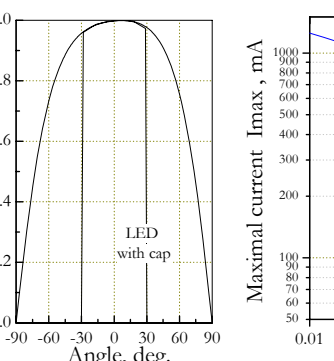
Output power and peak wavelength vs temperature, far-field pattern and maximal current vs operation conditions



Power at fix. current, arb.un.

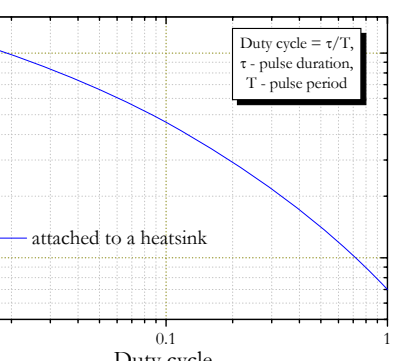
Peak wavelength,  $\mu\text{m}$

Temperature, °C



Intensity, arb.un.

Angle, deg.



Maximal current  $I_{\text{max}}$ , mA

Duty cycle

attached to a heatsink

Product specifications are subject to change without prior notice due to improvements or other reasons. Updated 24.10.12

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