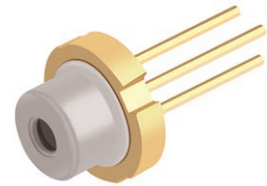


# PLT5 514 ( 514 +/-1 nm)

Wavelength selected version of OSRAM PLT5 520B\_P



## Applications

- Appliances & Tools
- Entertainment
- Functional Illumination
- Outdoor & Industrial Lighting
- Projection

## Features

- Optical output power (continuous wave): 50 mW ( $T_c = 25^\circ\text{C}$ )
- Typical emission wavelength: 514 nm
- Efficient radiation source for cw and pulsed operation
- Single mode semiconductor laser
- High modulation bandwidth
- TO56 package with photo diode

## Maximum Ratings

Parameter	Symbol		Values
Operating temperature	$T_{op}$	min. max.	-20 °C 60 °C
Storage temperature	$T_{stg}$	min. max.	-40 °C 85 °C
Peak output power $T_{case} = 25\text{ °C}$	$P_{opt}$	max.	55 mW
Reverse voltage <sup>1)</sup> $T_{case} = 25\text{ °C}$	$V_R$	max.	2 V
Soldering temperature $t_{max} = 10\text{ sec}$	$T_S$	max.	260 °C

Operation outside these conditions may damage the device. Operation at the maximum ratings influences lifetime.

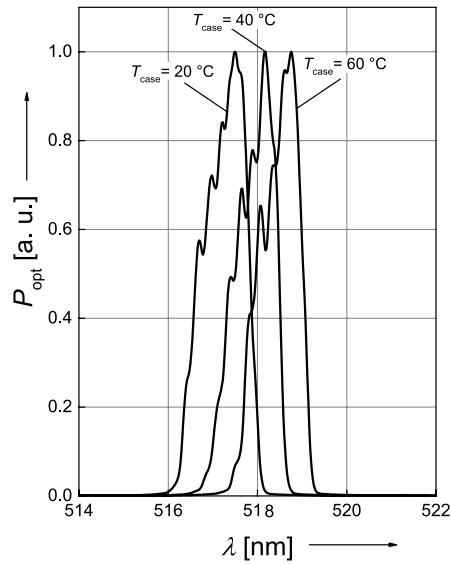
## Characteristics

$P_{\text{opt}} = 50 \text{ mW}$  (B1 - B3);  $T_c = 25 \text{ }^\circ\text{C}$

Parameter	Symbol		Values
Operating current <sup>2)</sup>	$I_{\text{op}}$	typ.	110 mA
		max.	130 mA
Operating voltage <sup>3)</sup>	$V_{\text{op}}$	typ.	5.8 V
		max.	6.5 V
Peak wavelength <sup>4)5)</sup>	$\lambda_{\text{peak}}$	min.	513 nm
		typ.	514 nm
		max.	515 nm
Spectral bandwidth (FWHM)	$\Delta\lambda$	typ.	1 nm
Beam divergence (FWHM) parallel to pn-junction	$\Theta_{\parallel}$	min.	6 °
		typ.	8 °
		max.	10 °
Beam divergence (FWHM) perpendicular to pn-junction	$\Theta_{\perp}$	min.	19 °
		typ.	22 °
		max.	25 °
Threshold current	$I_{\text{th}}$	typ.	30 mA
		max.	45 mA
TE polarization	$P_{\text{TE}}$	typ.	100:1
Modulation frequency	f	min.	100 MHz
Monitor current <sup>6)7)</sup>	$I_{\text{m}}$	typ.	90 $\mu\text{A}$

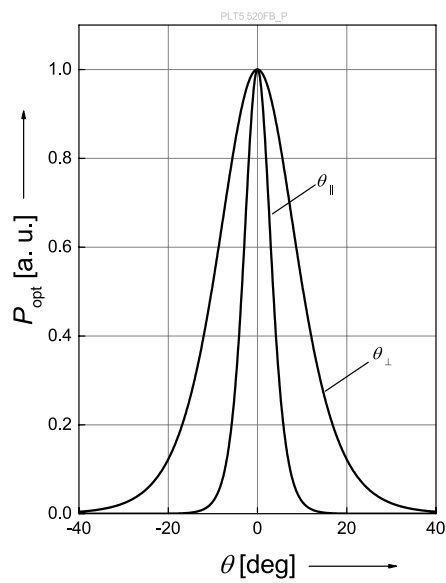
## Relative Spectral Emission 8), 9)

$$P_{\text{opt}} = f(\lambda); \text{ Group (B2)}$$



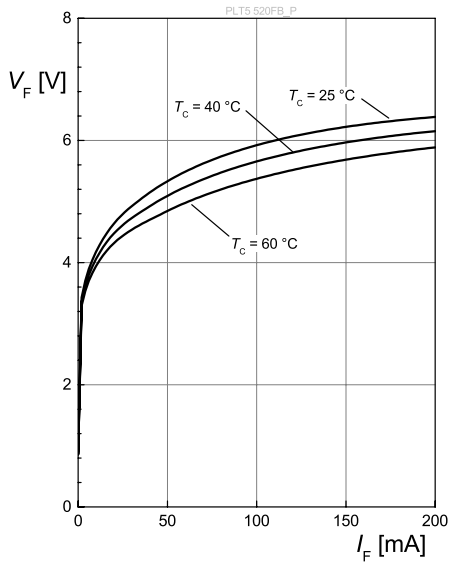
## Beam Divergence 9)

$$P_{\text{opt}} = f(\Theta)$$

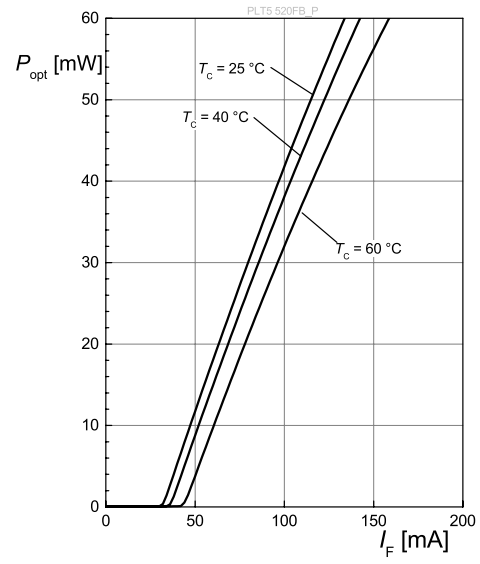


**Forward Voltage** 8), 9)

$$V_F = f(I_F)$$

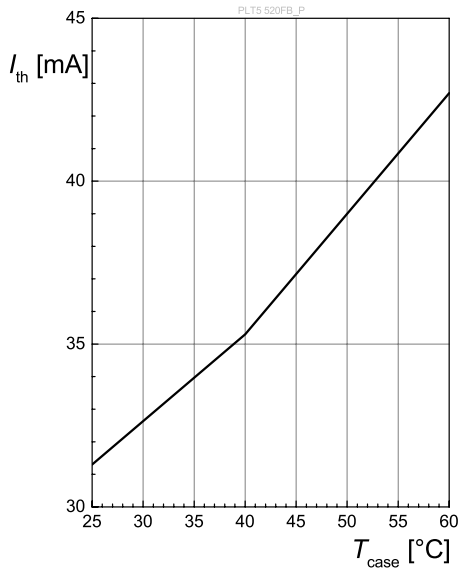
**Optical Output Power** 8), 9)

$$P_{\text{opt}} = f(I_F)$$



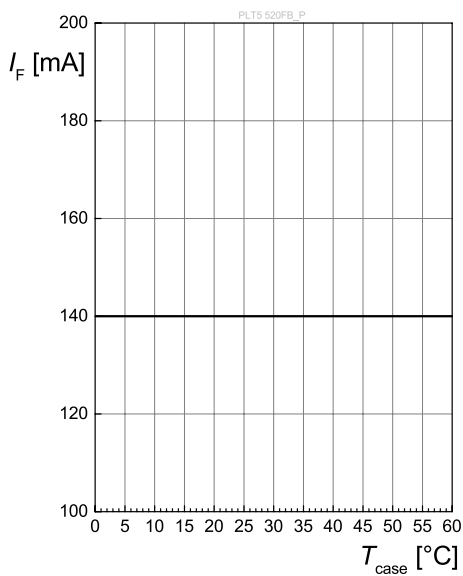
## Threshold Current <sup>8)</sup>

$$I_{th} = f(T_C)$$



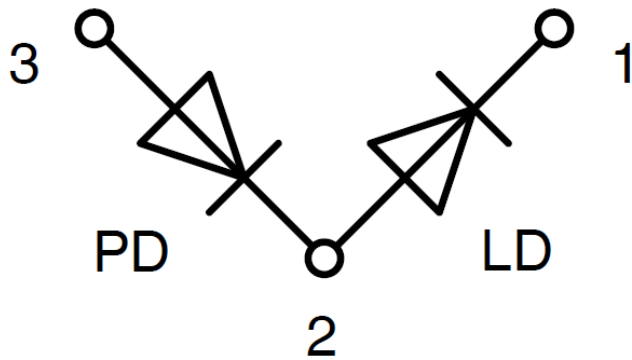
## Max. Permissible Forward Current

$$I_F = f(T_C)$$





## Electrical Internal Circuit



Pin	Description
PIN 1	LD Cathode
PIN 2	LD Anode, PD Cathode (case)
PIN 3	PD Anode