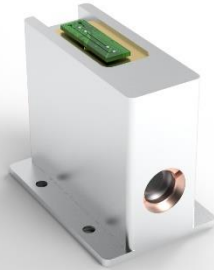


## 445nm Spatial Light Output Blue Laser

### RPK445-SL-20.00W



#### Features:

- ◆ 445nm wavelength
- ◆ Up to 20W output power
- ◆ Spatial light output
- ◆ High beam quality

#### Applications:

- ◆ Laser engraving
- ◆ Scientific research

Specifications(20°C)		Symbol	Unit	RPK445-SL-20.00W		
				Minimum	Typical	Maximum
<b>Optical Data<sup>(1)</sup></b>	Total CW Output Power	$P_{bol}$	W	-	20	-
	Center Wavelength	$\lambda_c$	nm	445±20		
	Spectral Width (FWHM)	$\Delta\lambda$	nm	-	6	-
	Wavelength Shift with Temperature	$\Delta\lambda/\Delta T$	nm/°C	-	0.1	-
	Wavelength Shift with Current	$\Delta\lambda/\Delta A$	nm/A	-	1	-
<b>Electrical Data</b>	Electrical-to-Optical Efficiency	PE	%	-	30	-
	Operating Current	$I_{bol}$	A	-	3	3.5
	Threshold Current	$I_{th}$	A	-	0.3	-
	Operating Voltage	$V_{op}$	V	-	18	20
	Slope Efficiency	$\eta$	W/A	-	7.4	-
<b>Spot Data</b>	Spot Size @ Focal plane	-	μm	-	70*160	-
	Divergent full width	-	mrad	-	-	70*70
	Focus length	-	mm	-	-	50
<b>Others</b>	ESD	$V_{esd}$	V	-	-	500
	Storage Temperature <sup>(2)</sup>	$T_{st}$	°C	-20	-	70
	Lead Soldering Temp	$T_{ls}$	°C	-	-	260
	Lead Soldering Time	t	sec	-	-	10
	Operating Temperature <sup>(3)</sup>	$T_{op}$	°C	15	-	30
	Relative Humidity	RH	%	15	-	75

(1) Data measured under operation output at 20W@20°C.

(2) A non-condensing environment is required for operation and storage.

(3) Operating temperature defined by the thermistor. Acceptable operating range is 15°C~30°C, but performance may vary.

## 445nm Spatial Light Output Blue Laser

### RPK445-SL-20.00W

Specifications(20°C)		Symbol	Unit	RPK445-SL-20.00W		
				Minimum	Typical	Maximum
<b>Optical Data<sup>(1)</sup></b>	Total CW Output Power	$P_{bol}$	W	-	15	-
	Center Wavelength	$\lambda_c$	nm	445±20		
	Spectral Width (FWHM)	$\Delta\lambda$	nm	-	6	-
	Wavelength Shift with Temperature	$\Delta\lambda/\Delta T$	nm/°C	-	0.1	-
	Wavelength Shift with Current	$\Delta\lambda/\Delta A$	nm/A	-	1	-
<b>Electrical Data</b>	Electrical-to-Optical Efficiency	PE	%	-	30	-
	Operating Current	$I_{bol}$	A	-	3	3.5
	Threshold Current	$I_{th}$	A	-	0.3	-
	Operating Voltage	$V_{op}$	V	-	13.5	15
	Slope Efficiency	$\eta$	W/A	-	5.5	-
<b>Spot Data</b>	Spot Size @ Focal plane	-	µm	-	70*180	-
	Divergent full width	-	mrad	-	-	70*70
	Focus length	-	mm	-	-	50
<b>Others</b>	ESD	$V_{esd}$	V	-	-	500
	Storage Temperature <sup>(2)</sup>	$T_{st}$	°C	-20	-	70
	Lead Soldering Temp	$T_{ls}$	°C	-	-	260
	Lead Soldering Time	t	sec	-	-	10
	Operating Temperature <sup>(3)</sup>	$T_{op}$	°C	15	-	30
	Relative Humidity	RH	%	15	-	75

(1) Data measured under operation output at 15W@20°C.

(2) A non-condensing environment is required for operation and storage.

(3) Operating temperature defined by the thermistor. Acceptable operating range is 15°C~30°C, but performance may vary.

## 445nm Spatial Light Output Blue Laser

### RPK445-SL-20.00W

Specifications(20°C)		Symbol	Unit	RPK445-SL-20.00W		
				Minimum	Typical	Maximum
<b>Optical Data<sup>(1)</sup></b>	CW Output Power	$P_{bol}$	W	-	10	-
	Center Wavelength	$\lambda_c$	nm	445±20		
	Spectral Width (FWHM)	$\Delta\lambda$	nm	-	6	-
	Wavelength Shift with Temperature	$\Delta\lambda/\Delta T$	nm/°C	-	0.1	-
	Wavelength Shift with Current	$\Delta\lambda/\Delta A$	nm/A	-	1	-
<b>Electrical Data</b>	Electrical-to-Optical Efficiency	PE	%	-	30	-
	Operating Current	$I_{bol}$	A	-	3	3.5
	Threshold Current	$I_{th}$	A	-	0.3	-
	Operating Voltage	$V_{op}$	V	-	9	10
	Slope Efficiency	$\eta$	W/A	-	3.75	-
<b>Spot Data</b>	Spot Size @ Focal plane	-	μm	-	70*160	-
	Divergent full width	-	mrad	-	-	70*70
	Focus length	-	mm	-	-	50
<b>Others</b>	ESD	$V_{esd}$	V	-	-	500
	Storage Temperature <sup>(2)</sup>	$T_{st}$	°C	-20	-	70
	Lead Soldering Temp	$T_{ls}$	°C	-	-	260
	Lead Soldering Time	t	sec	-	-	10
	Operating Temperature <sup>(3)</sup>	$T_{op}$	°C	15	-	30
	Relative Humidity	RH	%	15	-	75

(1) Data measured under operation output at 10W@20°C.

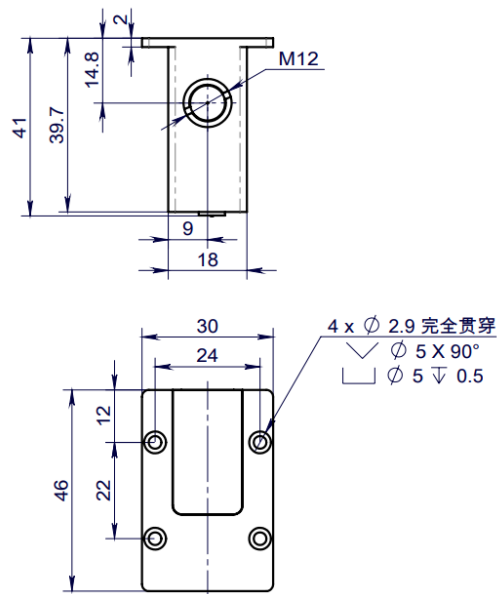
(2) A non-condensing environment is required for operation and storage.

(3) Operating temperature defined by the thermistor. Acceptable operating range is 15°C~30°C, but performance may vary.

## 445nm Spatial Light Output Blue Laser

### RPK445-SL-20.00W

#### Package Dimensions (mm)



#### OPERATING NOTES

- ◆ Avoid eye and skin exposure to direct radiation during operation.
- ◆ ESD precautions must be taken during storage, transportation and operation.
- ◆ Short-circuit is required between pins during storage and transportation.
- ◆ Please connect pins to wires by solder instead of using socket when operation current is higher than 6A. Soldering point should be close to the root of the pins. Soldering temperature should be lower than 260°C and time shorter than 10 second.
- ◆ Use constant current power supply to avoid surge current during operation.
- ◆ Laser diode must be used according to the specifications.
- ◆ Laser diode must work with good cooling.



**Declaration:** information and specifications contained herein are deemed to be reliable and accurate. BWT reserves the right to change, alter or modify the design and specifications of these products at any time without notice.22-09.