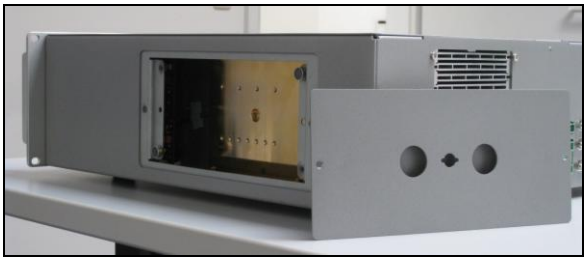
Pearl™ TKS – Laser Diode Turn Key System



Optimized for industrial applications, the Pearl™ TKS

Integrating *n*LIGHT's single-emitter based Pearl™ fiber-coupled diode laser modules, the system offers unparalleled reliability. The system's fast modulation rates, high reliability and robust industrial design make it the perfect tool for most industrial applications.

Features

- CE Certified for industrial applications
- Convenient user interfaces: RS232, Canbus, USB, Analog, or front panel control
- FieldFlex™ technology allows for in-field upgrade or replacement of Pearl modules
- Field replaceable fiber optic cables
- Industrial-grade sealed TEC with bi-directional temperature control
- Redundant interlocks for machine tool integration
- Advanced warning protocol prior to system errors
- DiodeSafe™ electronics
- Industrial grade electronics with multiple operation modes: CW, QCW, Gated, or Triggered Power Control
- 19" rack design with slim 3U form factor

Applications

- FPD Bonding
- Li-Ion Battery Welding
- Projection Displays
- Plastic Welding
- Soft Soldering
- Thin Metal Welding
- Medical Systems
- Entertainment
- Marking / Engraving
- Material Heating

Optional Accessories

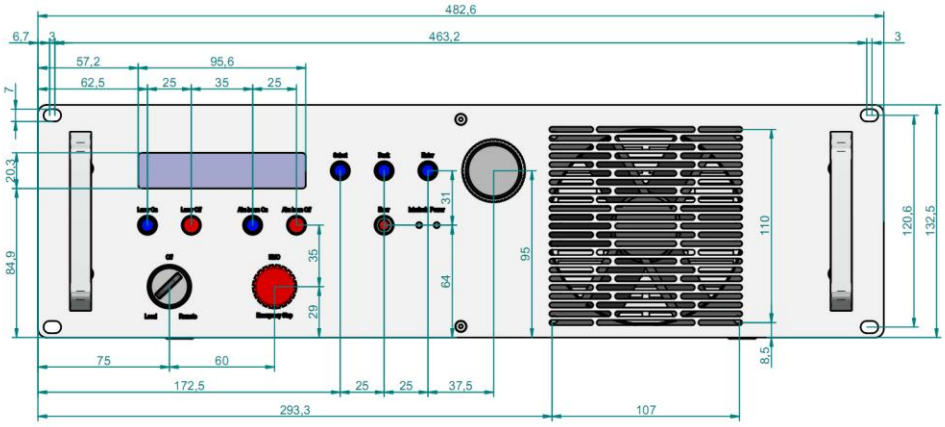
- Closed loop process control ideal to optimize and lock a process
- Integrated thermopile with self-calibrating power monitoring
- Pyrometer process monitoring
- Integrated pilot beam
- Collimation and process optics

Proven Performance

Typical Device Performance

Package		TKS-A	TKS-B	TKS-C
System Characteristics				
Mode of Operation		CW/QCW		
Maximum Heat Dissipation	W	60	100	120
Output Power Tunability	%	0-100		
Output Power Stability	%	<1		
Electrical				
Supply Voltage	VAC	100-250		
AC Power Supply Frequency	Hz	50-60		
Power Consumption	W	<600	<800	<900
Min Pulse Width	µs	10		
Rise/Fall Time	µs	<10 /10		
Maximum Repetition Rate	kHz	12.5		
Duty Ratio	%	5-95		
Mechanical				
Dimensions (LxWxH)	mm	432x482x133		
Weight	kg	16		
Cooling Method		Air Cooled		
General Condition				
Operating Temperature	°C	20 to +35		
Storage Temperature	°C	-20 to + 60		
Temperature delta from ambient to diode temperature	°C	15	10	5
Maximum Diode Waste Heat	W	60	100	120
Relative Humidity[1]	%	10 to 95		

[1]A non-condensing environment is required for storage and operation.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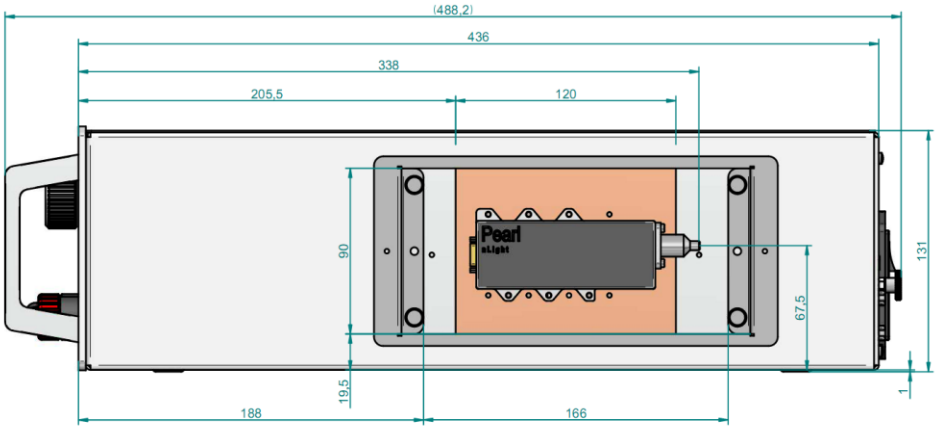
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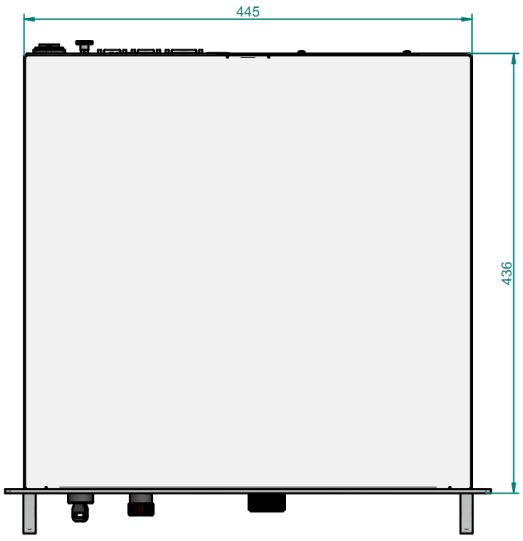
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