

Laser Welding

APPLICATIONS

Target Applications: hermetically sealed parts, electrical connectors, sensors, switches, e-water pump, e-ATF pump, slot liners

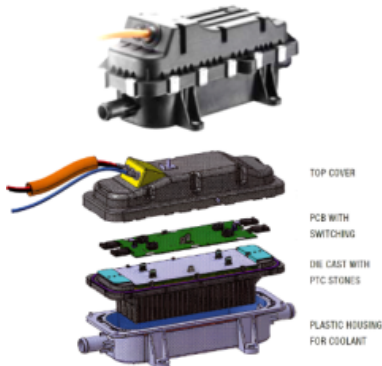
Connectors



Auxiliary ePumps

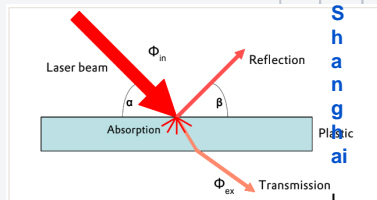


High voltage coolant heater - heat resistant coolant chamber



THEORY, KNOWLEDGE, MODELS & DATA

Introduction to Laser Welding



Laser Welding Database

Ongoing updated database that contains historical data, laser settings, laser transmission values, etc

LASER TRANSMISSIVE MATERIALS

Commercial Laser Transmissive "Black" Grades	Thicknesses	Absorbing Layer
R-3-410BL LZT	1mm	R-4-270BL, BR11BL
	1.5mm	R-4-270BL, R-4-240BL
	2mm	R-4-270BL, R-4-240BL
A-1130 HS LZT BK979	1mm	A-1625 HS BK324
	2mm	A-1625 HS BK324
AE-8940 LZT BK979	1mm	AE-8940
	2mm	AE-8940
A-1145 HS LZT BK979	1mm	A-1625 HS BK324
	2mm	A-1625 HS BK324
AE-8930 LZT (inactive)	1mm	AE-8935, AE-8940, AE-8950, AE-9933, AE-9950
	2mm	AE-8935 BK

CAPABILITIES




Shanghai

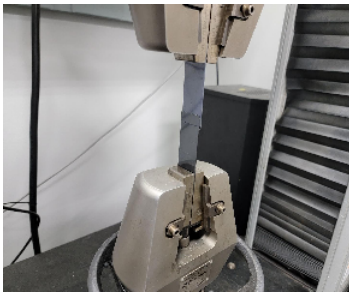
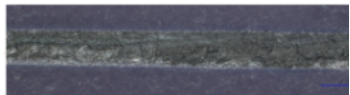
Leister Basic AT

200W Fiber Laser @ 1070nm

Spot size: 0.6mm / 1mm / 1.5mm / 3mm / 6mm



<p>Laser Welding Transmissive on Transmissive using "clearweld" dye</p>		<p>Alpharatta</p>	
		<p>50 W Fiber Laser @ 1064 nm</p> <p>Spot size: 1 mm</p>	
		<p>Laser Transmission measurement using % transmission at specific wavelengths</p>	<p>Alpharatta: Perkin Elmer Lambda 950 Shanghai: LPKF TMG3</p> 

<p style="text-align: center;">T e s t i n g</p>	<p style="text-align: center;">W e l d S t r e n g t h</p>	
	<p style="text-align: center;">M i c r o s c o p y</p>	

Laser Welding Team			
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