

LIGHT**PANTHER**

HIGH-ENERGY FIBER-DELIVERED LASER PLATFORM



HIGHEST ENERGY
AT THE FIBER TIP



INDUSTRIAL
GRADE DESIGN



LASER
COMPATIBILITY



SMART FIBER
MONITORING



STANDARD
SILICA FIBERS



BUILT FOR
FIELD OPERATION



NANOSECOND LASER **INDUSTRIAL APPLICATIONS**
(AEROSPACE, AUTOMOTIVE, NAVAL, ENERGY, METALLURGY...)



Laser Shock
Peening



Laser
Cleaning



Laser
Ultrasonics



LIBS
and more...



FOLLOW US !

shocklite-laser.com



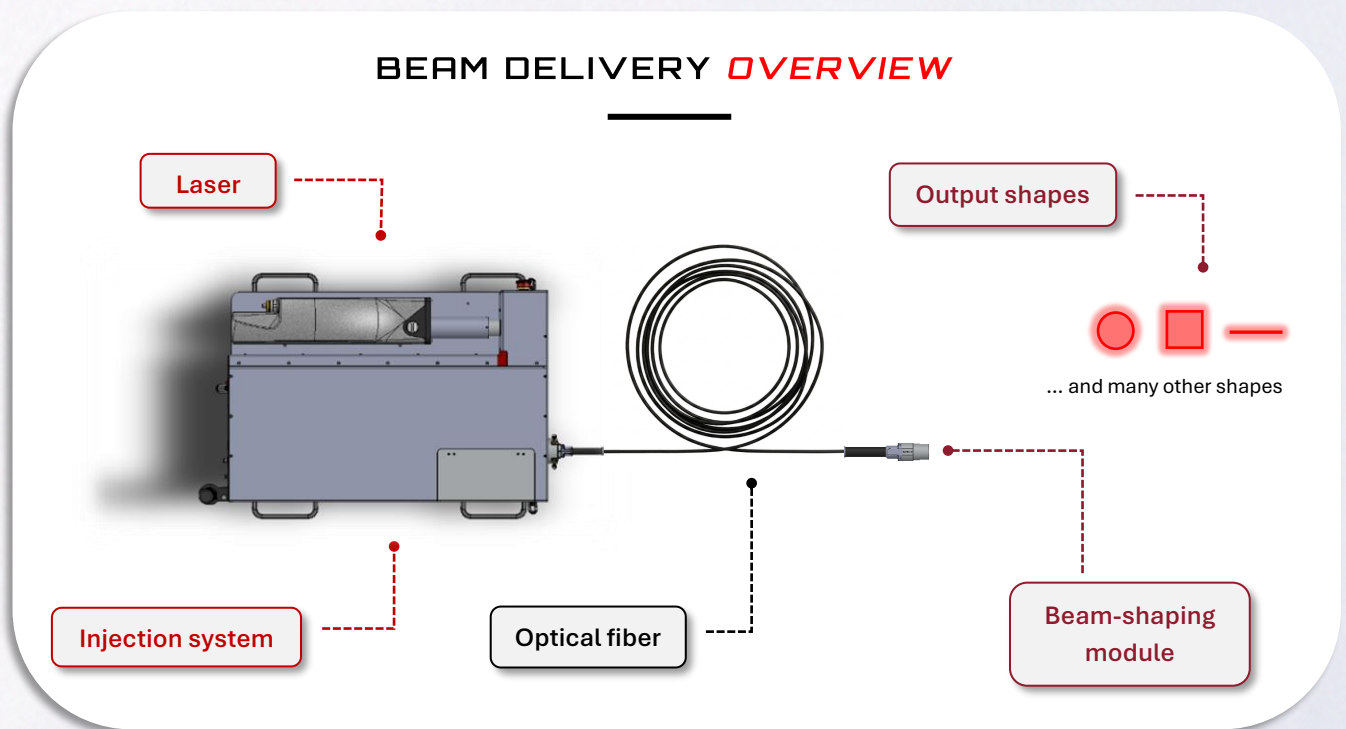
SCAN ME



DATASHEET

A NEW APPROACH TO HIGH-ENERGY LASER PROCESSING

LightPanther's dedicated optical architecture enables high-energy nanosecond laser pulses to be delivered through standard silica optical fibers, bringing flexible laser processing to demanding industrial environments.



01 — HIGH ENERGY DELIVERY

Reduced spatial coherence enables high-energy nanosecond pulses to be transmitted through standard silica optical fibers while preserving pulse energy and duration.

02 — FLEXIBLE & SAFE ACCESS

The fiber enables direct access to confined or hard-to-reach areas while keeping the laser source away from the processing zone, providing safer and more versatile operation in harsh or confined environments.

03 — CLEANER SURFACE PROCESSING

For suitable surface-treatment applications, laser processing can eliminate chemical or abrasive consumables, reducing process waste and simplifying material handling.

FIBERCHECKER

FiberChecker provides real-time fiber monitoring and system control for safe, reliable and autonomous operation.

01 LIVE FIBER MONITORING

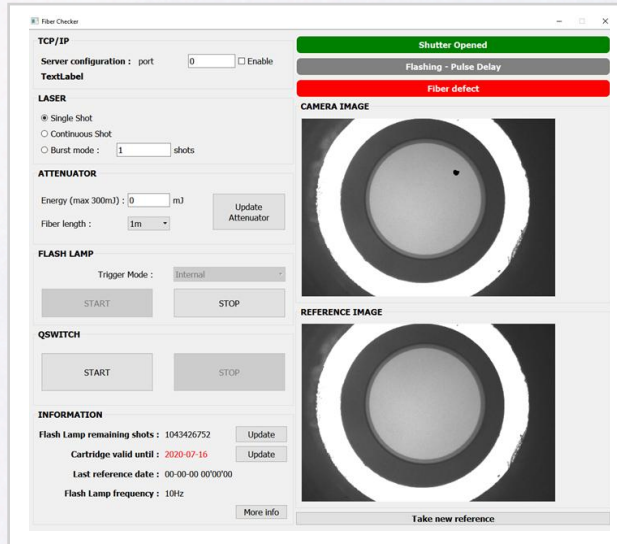
Continuous monitoring of input and output facets

03 FIBER DAMAGE PROTECTION

Prevents lasing in case of detected fiber damage

02 LASER CONTROL

Energy control + Single-shot / Continuous / Burst modes



04 ALIGNMENT ASSISTANT

Ensures precise beam centering within the fiber core

SPECIFICATIONS

	532 nm		1064 nm	
System transmission (%) (1)	67			
Repetition rate (Hz)	10	100	10	100
Pulse duration (ns)	6			
Fiber max. input energy (mJ) (2)	330	240	390	210
Fiber max. output energy (mJ) (3)	300	220	350	190
Fiber core diameter (mm) (4)	1.5			
Fiber bending radius (m) (5)	0.4			
NA	0.12			
Fiber length (m)	Up to 60			
Fiber output polarization	Random			
Fiber output intensity profile	Top-hat			
Fiber output beam shape	Circular, square, linear, etc.			

SYSTEM CONFIGURATIONS OPTIONS

- + Enclosed laser-head integration
- + Bypass mirror (switch between fiber delivery and free-space propagation)
- + Fiber output energy control
- + Beam pointing analyzer

(1) Optical transmission between laser output and fiber input
 (2) Higher energies can be reached. Contact us for more information
 (3) Energy stated for a 5m fiber
 (4) Lower core diameters are available for lower output energies
 (5) Lower bending radii are available for lower output energies