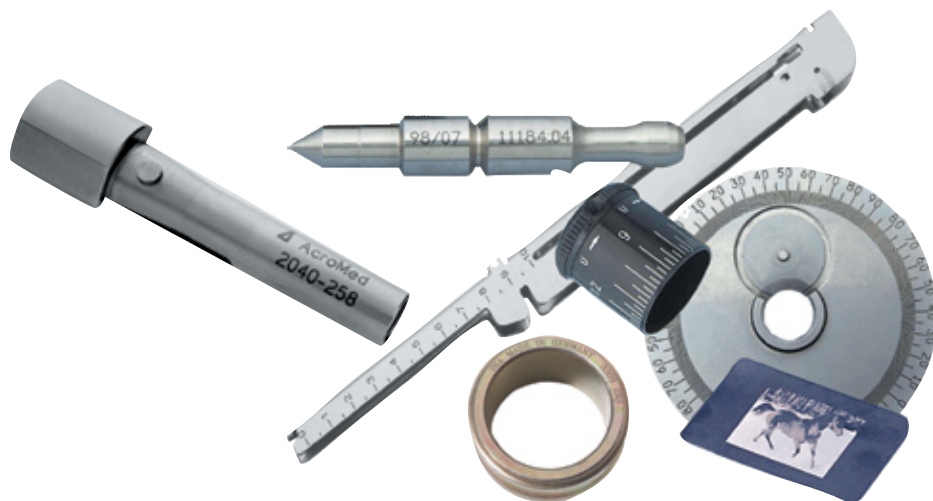


Innovative, compact and flexible ZENITH® Pulsed Fiber to Fiber Ytterbium Lasers are perfectly suited for marking applications that require 24/7 “set and forget”, unattended operation.

Select the **ZENITH® 10FQ** for low to medium speed applications and the **ZENITH® 20FQ** when higher power/faster process speeds are required. The 20F features upgraded power. Both lasers offer the additional long-term safeguard of built-in, polarization/optical isolators.



Example — Laser marking
on Coated Label Stock



Zenith® 10FQ and 20FQ Pulsed Fiber to Fiber Ytterbium Laser Systems

LASER SPECIFICATIONS

Compliance	CDRH, CE, UID
Wavelength	1,060nm
Laser Type	Ytterbium Fiber Laser, Galvo Steered
Laser Source	Diode-pumped, Fiber to Fiber, Pulsed
Pulse Repetition.....	20 KHz to 125KHz
Average Power ZENITH® 10FQ.....	10 Watts
Average Power ZENITH® 20FQ	20 Watts
Long term Output Power	<5% Instability
Peak Power ZENITH® 10FQ.....	>4KW
Peak Power ZENITH® 20FQ.....	>8KW
Beam Quality	M ² < 2
Fiber Length ZENITH® 10FQ	5 Meters (16 ft) Std.
Fiber Length ZENITH® 20FQ	3 Meters (9.8 ft) Std.
Optical Isolator ZENITH® 10FQ	Optional
Optical Isolator ZENITH® 20FQ	Standard
Positioning.....	Visible Red Diode Light. 636nm

Marking Speed	Raster = 300 CPS; Vector>500 CPS (application dependent)
Input Power	Selectable 115VAC / 230VAC, 50/60HZ
Cooling	Air Cooled, Fan/Filter (no water cooling required)
Operating Temperature Range.....	10° to 42° C Non-Condensing (50° F to 107° F)
Expected MTBF (diode).....	Greater than 50,000 hrs. maintenance free



Customized Part Handling
Options Available



Features DATA MATRIX™ 2-D Code Marking
Capability — Meets all Department of
Defense UID Requirements

TELESIS

Product Identification & Process Solutions

ZENITH® 20FQ

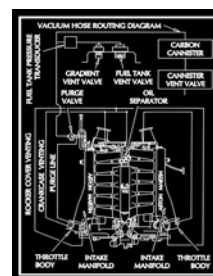
PULSED FIBER to FIBER LASERS

Powered by 110/230VAC with no water-cooling requirements, these units are extremely dependable over a long life, and are backed by a full TWO-YEAR factory warranty on the diode light source — one of the longest warranties in the laser industry.

"All of your employees seem to be willing and able to give that "little bit extra" to make everything go right. The laser marking equipment you have supplied to us thus far has been totally reliable and continues to perform flawlessly, helping Federal-Mogul Corporation reduce costs as it continues to improve product quality. I look forward to a continued relationship with the people I consider my "friends" at Telesis Technologies."

Best Regards,

Ed Reinemeyer
Process Engineer,
Federal-Mogul Corporation



Example

Laser marking
on Coated Label
Stock



Features DATA MATRIX™ 2-D Code Marking Capability —
Meets all Department of Defense UID Requirements

Zenith® 10FQ and 20FQ Pulsed Fiber to Fiber Ytterbium Laser Systems

DIMENSIONS

ZENITH® 10FQ Marking Head 51.0 (L) x 12.7 (W) x 14.0 (H) cm
20.1" (L) x 5.0" (W) x 5.5" (H)
Weight 6.82 kg (15 lbs.)

ZENITH® 10FQ Laser Controller Standard Rack Mount
42.5 (W) x 13.7 (H) x 50.8 (D) cm
(16.7" (W) x 5.4" (H) x 20.0" (D)
Weight 15 kg (33 lbs.)

ZENITH® 20FQ Marking Head 51.0 (L) x 12.7 (W) x 14.0 (H) cm
20.1" (L) x 5.0" (W) x 5.5" (H)
Weight 6.82 kg (15 lbs.)

ZENITH® 20FQ Laser Controller Standard Rack Mount
42.5 (W) x 13.7 (H) x 50.8 (D) cm
(16.7" (W) x 5.4" (H) x 20.0" (D)
Weight 15 kg (33 lbs.)

LENS CONFIGURATIONS AVAILABLE

Focal Length	Marking Field	Work Clearance
100mm	45mm x 45mm (1.8" x 1.8")	97mm (3.82")
160mm	90mm x 90mm (3.5" x 3.5")	176mm (6.93")
163mm	110mm x 110mm (4.3" x 4.3")	185mm (7.28")
254mm	155mm x 155mm (6.1" x 6.1")	296mm (11.65")
* 330mm	215mm x 215mm (8.4" x 8.4")	387mm (15.23")
* 420mm	275mm x 275mm (10.8" x 10.8")	493mm (19.40")

* Application dependent

SOFTWARE

Software..... Merlin® II LS
Operating System Windows™, 2000, XP, Desktop PC (Std),
Optional Laptop
Font Generation True Type Fonts
Barcodes and Matrix..... 2D Data Matrix™, PDF417, BC 39,
Interleaved 2 of 5, UPCA/UPCE BC 128,
Maxi Code, Code 93, QR Code and Others
Graphic Formats Raster and Vector,
BMP, .GIF, .JPG, .WMF, .EMF, .PLT, .DXF
Serialization Automatic and Manual Input Host
Interface Capable
Linear Marking..... Scalable with Letter Spacing Control
Arc Text Marking Scalable and Adjustable
Drawing Tools Line, Rectangle, Arc, Circle
Interface..... Serial, I/O and Host capable
Power Monitoring Self-Calibrating, Output Power Feedback
and Auto Adjustment

TELESIS

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