



CATALOG 2006

Version 1.2

WESTERN PHOTONICS TECHNOLOGY



Western Photonics Technology develops and manufactures laser systems, endoscopes and industrial borescopes, optics and micro-lenses, nonlinear crystals(polishing), light fibers and image fibers, CCD and CMOS cameras and adaptors, holographic systems and products etc. With over 20 years of experience in optical and laser components and systems, Western Photonics Technology guarantees the best price in either standard or custom-made products, provides extremely high quality products, and offers an excellent service for the industry.



Western Photonics Technology
626 S. Sierra Vista Ave.
Suite 101
Alhambra CA 91801
USA

Tel: 626 289 1686
Fax: 626 289 1048
Email: info@wptec.com
Website: www.wptec.com



Contact

With a strong emphasis on product quality and customer services, Western Photonics Technology develops and manufactures laser systems, endoscopes and industrial borescopes, optics and micro-lenses, light fibers and image fibers, CCD and CMOS cameras and adaptors, holographic systems and products etc. With over 20 years of experience in optical and laser components and systems, Western Photonics Technology guarantees the best price in either standard or custom-made products, provides extremely high quality products, and offers an excellent service for the industry.

- **Best price**
- **Highest quality**
- **Largest variety**
- **Fastest response time**
- **No minimum order**

Please feel free to contact our engineers for further information.

Western Photonics Technology
626 S. Sierra Vista Ave., STE 101
Alhambra, CA 91801
Tel: 626 289 1686 Fax: 626 289 1048
Email: info@wptec.com
Website: www.wptec.com

Table of Contents

Table of Contents.....	2
1. Laser systems	3
2. Rigid/Flexible Borescopes	4
2.1 Rigid Borescopes/Endoscopes.....	4
2.2 Light Source Specifications.....	5
2.3 Optical Fiber Light Cables.....	5
2.4 Light Fibers.....	6
2.5 Semi-Flexible Fiber Image Bundles	6
2.6 Video C-mount Adaptor	7
3. Optics and laser optics	8
3.1 Plano-Concave lenses.....	8
3.2 Plano-Convex lenses.....	10
3.3 Windows	10
3.4 Objective	12
3.5 Light Guide Lens Assemblies	12
4. Camera.....	13
5. Holographic products.....	15

1. Laser Systems



CTH:YAG Specifications

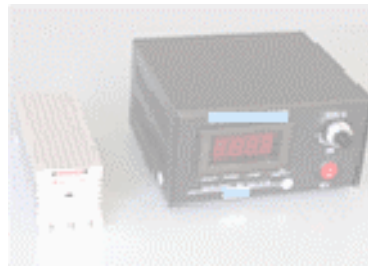
Laser System: Holmium YAG Laser
 Wavelength: 2.1µm
 Pulse Energy: 0.2 – 5.0 J
 Repetition Rate: 5 – 15Hz
 Average Power: 30W, 50W
 Pulse Duration: 200µs, 800µs
 Pulse Peak Power: 15KW
 Fiber Delivery: Option
 Aiming Beam: Green Diode Laser
 Utilities: 220V, 50Hz, 30A
 110V, 50Hz, 60A
 Cooling: Integrated refrigerant
 Dimensions:
 Weight:

Applications

Industrial Processing
 Biomedical Applications
 Atmospheric Testing
 Laser Surgery
 Laser dentistry

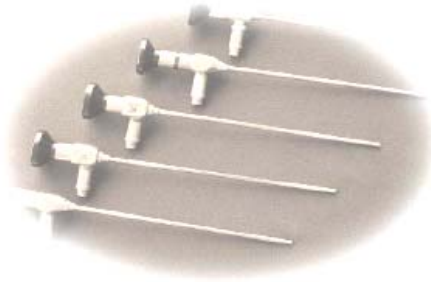
Main Features

- * High reliability
- * Low maintenance



Other wavelengths: 266nm, 355nm, 457nm, 473nm, 532nm, 808nm, 880nm, 940nm, 980nm, 1064nm, 1320nm, 1550nm, 2100nm, 2900nm, 10.6um etc.

2. Rigid/Flexible Borescopes



Specifications

Outer Diameter: 1mm to 15mm

Working Length: up to 400mm

Field of View: 70°

Focusing Range: 0 - ∞

Viewing Angle: 0°, 15°, 30°, 45°, 70°

Main Applications

- * Inside narrow diameter holes and pipes.
- * Inside cast and hydraulic parts and honing holes
- * Inside aircraft engines, hollow walls and machinery
- * Excellent images are delivered by eye or when a camera is attached.



Main Features

- * Clear, high-resolution images
- * Outstanding durability

2.1 Rigid Boroscopes/Endoscopes

<i>Item Number</i>	<i>Out Diameter (mm)</i>	<i>Working Length (mm)</i>	<i>Viewing Angle(°)</i>	<i>Price (US\$)</i>
WTR030-050-00	3.0	50	0	
WTR030-090-00	3.0	90	0	
WTR030-090-30	3.0	90	30	
WTR040-175-00	4.0	175	0	
WTR040-175-30	4.0	175	30	
WTR040-300-00	4.0	300	0	
WTR040-300-45	4.0	300	45	
WTR040-300-70	4.0	300	70	
WTR050-185-00	5.0	185	0	
WTR050-185-30	5.0	185	30	



WTR050-185-70	5.0	185	70
WTR050-300-00	5.0	300	0
WTR050-300-30	5.0	300	30
WTR080-185-00	8.0	185	0
WTR080-185-70	8.0	185	70
WTR100-325-00	10	325	0
WTR100-325-30	10	325	30
WTR100-325-45	10	325	45
WTR100-325-70	10	325	70
WTR120-325-00	12	325	0

2.2 Light Source Specifications

Item Number	Lamp	Weight	Dimensions	Power supply	Power consumption	Price (US\$)
	150W	6kg	320x358x98mm	110V AC	160W	
	24W high efficient quartz halogen, 12V	6kg	320x358x98mm	110V AC	25W	

Custom design and assembly are also available.

Operating temperature: Probe -10 to 150 °C (+14 to +302 °F)

Other parts -10 to 40 °C (+14 to +302 °F)

Operating pressure: Probe in air 0.7 to 1.7 bar (10.3 to 25 lbf/in²)
in water 1.0 to 1.7 bar (14.7 to 25 lbf/in²)

Fluid resistance: Probe can be immersed in salt water, petrol, diesel, engine oil, brake fluid, ethylene, glycol and methanol at normal temperature.

2.3 Optical Fiber Light Cables

Item Number	Diameter (mm)	Length (mm)	Price (US\$)
WTLGT0640-18	4.0	1800	
WTLGT0640-25	4.0	2500	
WTLGT0640-30	4.0	3000	
WTLGT0650-18	5.0	1800	
WTLGT0650-25	5.0	2500	
WTLGT0650-30	5.0	3000	



2.4 Light Fibers

<i>Item Number</i>	<i>Diameter (mm)</i>	<i>NA</i>	<i>Price (US\$)</i>
WTLF070-010	1	0.70	
WTLF070-012	1.2	0.70	
WTLF070-020	2	0.70	
WTLF070-030	3	0.70	
WTLF070-040	4	0.70	
WTLF070-060	6	0.70	
WTLF086-010	1	0.86	
WTLF086-018	1.8	0.86	
WTLF086-020	2	0.86	
WTLF086-030	3	0.86	
WTLF086-040	4	0.86	
WTLF086-060	6	0.86	
WTLF086-120	12	0.86	

2.5 Semi-Flexible Fiber Image Bundles

<i>Item Number</i>	<i>Diameter (mm)</i>	<i>Angle of View (°)</i>	<i>Price (US\$)</i>
WTSIB-020	0.25	50 / 70	
WTSIB-035	0.42	50 / 70	
WTSIB-037	0.45	50 / 70	
WTSIB-050	0.60	50 / 70	
WTSIB-080	1.00	50 / 70	
WTSIB-100	1.80	50 / 70	
WTSIB-150	2.60	50 / 70	
WTSIB-200	3.00	50 / 70	



2.6 Video C-mount Adaptor

<i>Item Number</i>	<i>Focal Length (mm)</i>	<i>Price (US\$)</i>
WTRVC-001	23.0	
WTRVC-002	27.0	
WTRVC-003	32.0	
WTRVC-004	18.0	

3. Optics and laser optics

Optical materials include BK7, Fused Silica, Sapphire, CaF2, SF6 etc.

3.1 Plano-Concave lenses

Specifications

Material: BK7

Refractive Index: 1.5168 (at 587.6 nm)

Focal Length Tolerance: $\pm 2\%$

Diameter Tolerance: $+0, -0.04$ mm

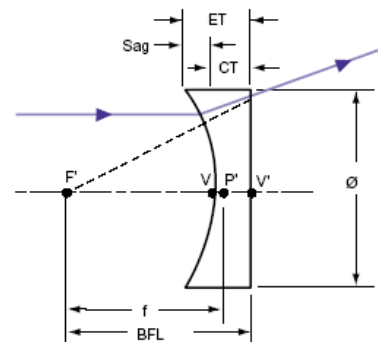
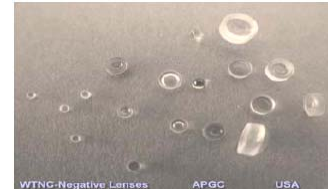
Center Thickness Tolerance: ± 0.02 mm

Surface Flatness: $\lambda/10$ at 632.8 nm

Wedge Angle: < 5 arcmin

Surface Quality: 20-10 scratch and dig
Uncoated

Diameter from 1mm to 100 mm



<i>Item Number</i>	<i>Focal Length (mm)</i>	<i>Diameter ϕ (mm)</i>	<i>Principal Point V P' (mm)</i>	<i>Radius of Curvature (mm)</i>	<i>Center Thickness CT (mm)</i>	<i>Edge Thickness ET (mm)</i>	<i>Price (US\$)</i>
WTNC090-050-050		0.90		0.50		0.50	
WTNC090-065-047		0.90		0.65		0.47	
WTNC100-050-050		1.00		0.50		0.50	
WTNC110-060-030		1.10		0.60		0.30	
WTNC120-060-040		1.20		0.60		0.40	
WTNC120-065-045		1.20		0.65		0.45	
WTNC130-065-050		1.30		0.65		0.50	
WTNC130-075-050		1.30		0.75		0.50	
WTNC140-040-050		1.40		0.40		0.50	
WTNC140-060-045		1.40		0.60		0.45	
WTNC145-065-045		1.45		0.65		0.45	
WTNC145-075-050		1.45		0.75		0.50	
WTNC150-050-050		1.50		0.50		0.50	
WTNC150-075-050		1.50		0.75		0.50	
WTNC160-080-065		1.60		0.80		0.65	
WTNC160-090-050		1.60		0.90		0.50	
WTNC160-140-070		1.60		1.40		0.70	
WTNC170-047-058		1.70		0.47		0.58	



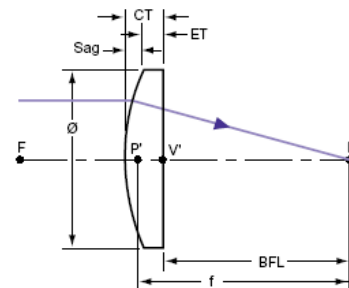
WTNC170-090-035	1.70	0.90	0.35
WTNC180-065-050	1.80	0.65	0.50
WTNC180-090-050	1.80	0.90	0.50
WTNC185-090-050	1.85	0.90	0.50
WTNC185-120-050	1.85	1.20	0.50
WTNC200-050-050	2.00	0.50	0.50
WTNC200-060-050	2.00	0.60	0.50
WTNC200-075-060	2.00	0.75	0.60
WTNC200-080-062	2.00	0.80	0.62
WTNC200-090-055	2.00	0.90	0.55
WTNC200-120-040	2.00	1.20	0.40
WTNC200-120-060	2.00	1.20	0.60
WTNC200-120-090	2.00	1.20	0.90
WTNC200-150-070	2.00	1.20	0.90
WTNC200-150-080	2.00	1.50	0.80
WTNC200-240-070	2.00	2.40	0.70
WTNC200-250-070	2.00	2.50	0.70
WTNC210-090-075	2.10	0.90	0.75
WTNC220-090-050	2.20	0.90	0.50
WTNC220-090-060	2.20	0.90	0.60
WTNC220-100-050	2.20	1.00	0.50
WTNC220-100-060	2.20	1.00	0.60
WTNC220-120-090	2.20	1.20	0.90
WTNC230-090-050	2.30	0.90	0.50
WTNC240-075-070	2.40	0.75	0.70
WTNC240-090-060	2.40	0.90	0.60
WTNC240-100-060	2.40	1.00	0.60
WTNC240-150-060	2.40	1.50	0.60
WTNC240-200-050	2.40	2.00	0.50
WTNC245-090-050	2.45	0.90	0.50
WTNC250-090-055	2.50	0.90	0.55
WTNC250-110-050	2.50	1.10	0.50
WTNC280-050-050	2.80	0.50	0.50
WTNC280-080-070	2.80	0.80	0.70
WTNC280-150-060	2.80	1.50	0.60
WTNC300-140-090	3.00	1.40	0.90
WTNC300-150-050	3.00	1.50	0.50
WTNC300-170-055	3.00	1.70	0.55
WTNC300-190-110	3.00	1.90	1.10
WTNC300-195-095	3.00	1.95	0.95
WTNC350-150-085	3.50	1.50	0.85
WTNC400-170-150	4.00	1.70	1.50
WTNC500-200-140	5.00	2.00	1.40
WTNC600-150-090	6.00	1.50	0.90
WTNC650-130-150	6.50	1.30	1.50

Custom design and assembly are also available.

3.2 Plano-Convex lenses

Specifications

Material: BK7
 Refractive Index: 1.5168 (at 587.6 nm)
 Focal Length Tolerance: $\pm 2\%$
 Diameter Tolerance: $+0, -0.04$ mm
 Center Thickness Tolerance: ± 0.02 mm
 Surface Flatness: $\lambda/10$ at 632.8 nm
 Wedge Angle: <5 arcmin
 Surface Quality: 20-10 scratch and dig
 Uncoated
 Diameter from 1mm to 100mm



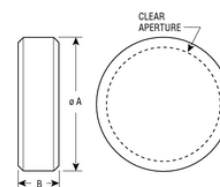
<i>Item Number</i>	<i>Focal Length (mm)</i>	<i>Diameter ϕ (mm)</i>	<i>Principal Point V P' (mm)</i>	<i>Radius of Curvature (mm)</i>	<i>Center Thickness CT (mm)</i>	<i>Edge Thickness ET (mm)</i>	<i>Price (US\$)</i>
WTPCL200-140-090		2.00		1.40		0.90	
WTPCL200-180-155		2.00		1.80		1.55	
WTPCL220-140-150		2.20		1.40		1.50	
WTPCL220-145-155		2.20		1.45		1.55	

Custom design and assembly are also available.

3.3 Windows

Specifications

Material: BK7
 Refractive Index: 1.5168 (at 587.6 nm)
 Diameter Tolerance: $+0, -0.04$ mm
 Surface Flatness: $\lambda/10$ at 632.8 nm
 Wedge Angle: <5 arcmin
 Surface Quality: 20-10
 Uncoated
 Diameter from 1mm to 100mm





<i>Item Number</i>	<i>Diameter ϕ (mm)</i>	<i>Thickness CT (mm)</i>	<i>()</i>	<i>Price (US\$)</i>
WTW090-030	0.90	0.30		
WTW100-030	1.00	0.30		
WTW100-040	1.00	0.40		
WTW110-035	1.10	0.35		
WTW130-030	1.30	0.30		
WTW140-040	1.40	0.40		
WTW150-040	1.50	0.40		
WTW160-040	1.60	0.40		
WTW170-040	1.70	0.40		
WTW190-040	1.90	0.40		
WTW200-020	2.00	0.20		
WTW200-030	2.00	0.30		
WTW200-040	2.00	0.40		
WTW200-050	2.00	0.50		
WTW200-060	2.00	0.60		
WTW200-130	2.00	1.30		
WTW240-050	2.40	0.50		
WTW250-050	2.50	0.50		
WTW260-050	2.60	0.50		
WTW270-080	2.70	0.80		
WTW280-075	2.80	0.75		
WTW290-030	2.90	0.30		
WTW300-050	3.00	0.50		
WTW320-040	3.20	0.40		
WTW340-040	3.40	0.40		
WTW350-100	3.50	1.00		
WTW360-080	3.60	0.80		
WTW370-060	3.70	0.60		
WTW400-120	4.00	1.20		
WTW420-040	4.20	0.40		
WTW440-040	4.40	0.40		
WTW440-100	4.40	1.00		
WTW450-080	4.50	0.80		
WTW450-050	4.50	0.50		
WTW470-050	4.70	0.50		
WTW480-100	4.80	1.00		
WTW490-100	4.90	1.00		
WTW490-200	4.90	2.00		
WTW500-175	5.00	1.75		
WTW600-100	6.00	1.00		
WTW800-200	8.00	2.00		

Custom design and assembly are also available.

3.4 Objective

Specifications

Material: BK7 etc.

Diameter Tolerance: +0, -0.04 mm

Diameter from 1mm to 100mm

<i>Item Number</i>	<i>Diameter ϕ (mm)</i>	<i>Angle of View Field ($^{\circ}$)</i>	<i>Depth of View Field (mm)</i>	<i>()</i>	<i>()</i>	<i>()</i>	<i>Price (US\$)</i>
WTOLZQJ020	2.0	85	3 – 50				
WTOLZQJ022	2.2	85	3 – 50				
WTOLZQJ025	2.5	85	3 – 50				
WTOLWJ25-98	2.5	105	3 – 100				
WTOLWJ30-98	3.0	105	3 – 100				
WTOLWJ32-98	3.2	105	3 – 100				
WTOLJCJ32-II	3.2	105	3 – 100				
WTOLJCJ35-III	3.5	105	3 – 100				
WTOLYH020	2.0	70	5 – 50				
WTOLYH022	2.2	70	5 – 50				
WTOLYH025	2.5	70	5 – 50				

Custom design is also available.

3.5 Light Guide Lens Assemblies

Specifications

Focal Length

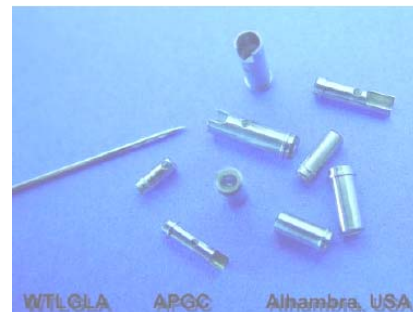
Diameter

Clear Aperture

Working Distance

Total Length

Diameter from 1mm to 100mm



WTLGLA APGC Alhambra, USA

<i>Item Number</i>	<i>Focal Length (mm)</i>	<i>Diameter ϕ (mm)</i>	<i>Clear Aperture (mm)</i>	<i>Working Distance (mm)</i>	<i>Total Length (mm)</i>	<i>Coating</i>	<i>Price (US\$)</i>
WTLGLA-186		1.86					
WTLGLA187		1.86					
WTLGLA-224		2.24					
WTLGLA-227		2.27					
WTLGLA-247		2.47					
WTLGLA-257		2.57					
WTLGLA-277		2.77					
WTLGLA-287		2.87					

Custom design and assembly are also available.


4. Camera

Applications

Industrial imaging
 Scientific imaging
 Automation imaging

Features

High reliability

	<p>TMC-1402 (formerly TMC-1400)</p> <hr/> <p>TMC-1402CL</p>	<p>Miniature, High Resolution (1392 x 1040), Progressive Scan, Color Camera, 15/30 fps selectable, analog and digital (RS-644) outputs</p> <hr/> <p>TMC-1402 with Camera Link</p>	
---	--	---	--

	<p>TMC-6760CL TMC-6760</p>	<p>Progressive Scan, Compact Color Camera, 648 H x 484 V, 60 fps, RGB analog output, Camera Link</p> <hr/> <p>Progressive Scan, Compact Color Camera, 648 H x 484 V, 60 fps, RGB analog output, RS-644 digital output</p>	
	<p>TMC-1325CL</p>	<p>Progressive Scan, Color Camera, 1392 H x 1040 V, 15/30 fps selectable, partial scan 500 and 250 lines</p>	
	<p>TMC-9700</p>	<p>Progressive Scan, Color Camera, 768 H x 484 V, 30 fps, analog and digital RGB output</p>	

5. Holographic products

Western Photonics Technology (Western technology) designs and develops holographic systems and products, such as hologram films, hologram printing papers, hologram folders, hologram labels, hologram stickers, hologram ID, hologram displays, and hologram packages.

