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상 세 내 역

1. 주요규격

1-1. Ø12.7 mm Post Holder, Spring-Loaded Hex-Locking Thumbscrew, L=50 mm, 5 Pack

- Construction : Black Anodized Aluminum
- Thumbscrew : Spring-Loaded, Hex-Locking Thumbscrew (3/16" or 5 mm) for Positioning Ease
- Extra Wide Relief Cut Provides a Two-Line Stable Contact for Post
- Optical Table Mounting : 1/4"-20 (M6) Tapped Hole on Bottom
- 모델 사진



1-2. Ø31.8 mm Studded Pedestal Base Adapter, M6 Thread, 5 Pack

- Convert Standard Ø1/2" Post Holders and Ø1" Post Extensions into Pedestal-Style Mounts
- Has a magnet in the base that is sufficiently strong to securely hold the base in place without clamping to an optical table
- 모델 사진



1-3. Ø12.7 mm Optical Post, SS, M4 Setscrew, M6 Tap, L = 300 mm

- Material : 303 Stainless Steel
- One M4 Tapped Hole at Top and One M6 Tapped Hole at Base
- Removable Double-Ended M4 Setscrew
- Length : 300 mm
- 모델 사진



1-4. Ø12.7 mm Post Holder, Spring-Loaded Hex-Locking Thumbscrew, L=75 mm, 5 Pack

- Construction : Black Anodized Aluminum
- Thumbscrew : Spring-Loaded, Hex-Locking Thumbscrew (3/16" or 5 mm) for Positioning Ease
- Extra Wide Relief Cut Provides a Two-Line Stable Contact for Post
- Optical Table Mounting : 1/4"-20 (M6) Tapped Hole on Bottom
- 모델 사진



1-5. Ø12.7 mm Optical Post, SS, M4 Setscrew, M6 Tap, L = 50 mm, 5 Pack

- Material : 303 Stainless Steel
- One M4 Tapped Hole at Top and One M6 Tapped Hole at Base
- Removable Double-Ended M4 Setscrew
- Length : 50 mm
- 모델 사진



1-6. $\text{Ø}12.7$ mm Optical Post, SS, M4 Setscrew, M6 Tap, L = 200 mm

- Material : 303 Stainless Steel
- One M4 Tapped Hole at Top and One M6 Tapped Hole at Base
- Removable Double-Ended M4 Setscrew
- Length : 200 mm
- 모델 사진



1-7. Kinematic Mirror Mount for $\text{Ø}1$ inch Optics

- Mounts $\text{Ø}1$ " Optics at Least 0.12 " (3 mm) Thick
- Optic Held with a Nylon-Tipped Setscrew
- Angular Range: $\pm 4^\circ$
- Resolution: 8 mrad (0.5°) per Revolution
- Two Counterbored #8 (M4) Through Holes Allow for Left- or Right-Handed Orientation
- $5/64$ " (2.0 mm) Hex Sockets in Lead Screws Accessible With or Without Knobs Removed
- 모델 사진



1-8. Ø12.7 mm Optical Post, SS, M4 Setscrew, M6 Tap, L = 75 mm, 5 Pack

- Material : 303 Stainless Steel
- One M4 Tapped Hole at Top and One M6 Tapped Hole at Base
- Removable Double-Ended M4 Setscrew
- Length : 75 mm
- 모델 사진



1-9. Swivel-Base Mini-Series Post Holder, 1.5 inch (38 mm) Tall, 1/4 inch (M6) Slot

- 360° Swiveling Base with 1/4" -20 (M6) Slot
- Precision-Machined Square Relief Cut Provides Stable Two-Line Contact
- Knurled Aluminum Thumbscrew with 3/32" Hex Firmly Holds Post
- The base's swivel design enables easy access to surrounding mounting holes
- 모델 사진



1-10. SM05 Ring-Actuated Iris Diaphragm ($\text{Ø}0.6 - \text{Ø}5.0 \text{ mm}$)

- SM05 (0.535"-40) Threaded on Both Sides
- Ring-Controlled, $\text{Ø}0.6 \text{ mm} - \text{Ø}5.0 \text{ mm}$ Aperture
- Black Spring Steel Leaves
- Locking Setscrew with 0.035" (0.9 mm) Hex
- The design of this iris is well suited for integration into a cage system with minimal alignment
- 모델 사진



1-11. $\text{Ø}600 \mu\text{m}$, 0.39 NA, SMA-SMA Fiber Patch Cable, Low OH, 1 m Long

- Fiber : FT600EMT
- Core Diameter : $600 \pm 10 \mu\text{m}$
- NA : 0.39
- Cladding Diameter : $630 \pm 10 \mu\text{m}$
- Coating Diameter : $1040 \pm 30 \mu\text{m}$
- Short-Term Bend Radius : 48 mm
- Long-Term Bend Radiusa : 96 mm
- Wavelength Range : 400 to 2200 nm
- Jacket : $\text{Ø}3 \text{ mm}$ Orange PVC Furcation Tubing
- 모델 사진



1-12. Adapter with External SM05 Threads and Internal SM1 Threads

- For use with microscope objectives
- Typical Application : Step Up/Down Lens Tube Size
- External Threads : SM05 (0.535"-40)
- Internal Threads : SM1 (1.035"-40)
- 모델 사진



1-13. Ø200 µm, 0.22 NA, Low OH, FC/PC to SMA905 Fiber Patch Cable, 1 m

- Fiber : FG200UEA
- Core Diameter : $200 \pm 4 \mu\text{m}$
- Cladding Diameter : $220 \pm 2 \mu\text{m}$
- Coating Diameter : $320 \mu\text{m} \pm 16 \mu\text{m}$
- NA : 0.22 ± 0.02
- Bend Radius (Short/Long Term) : 23 mm / 46 mm
- Wavelength Range : 400 to 2400 nm
- Ferrule Material : FC/PC - Ceramic / SMA - Stainless Steel
- Jacket : Ø3 mm Orange PVC Furcation Tubing
- 모델 사진



1-14. 1/2 inch x 1/2 inch Protected Silver Mirror

- Face Dimensions : 1/2" x 1/2" (12.7 mm x 12.7 mm)
- Thickness : 6.0 mm (0.24")
- Reflectance (Average) : >97% for 450 nm - 2 μ m, >95% for 2 - 20 μ m
- Substrate : UV Fused Silica
- Surface Flatness (Peak to Valley) : $\lambda/10$ @ 633 nm
- Surface Quality : 40-20 Scratch-Dig
- Clear Aperture : >90% of Dimension
- 모델 사진



1-15. $f = 150.0$ mm, $\varnothing 1$ inch Achromatic Doublet, ARC: 400 - 1100 nm

- Diameter (mm) : 25.4
- Focal Length / Back Focal Length (mm) : 150.0 / 143.68
- 1st / 2nd / 3rd Radius of Curvature (mm) : 87.9 / -105.6 / Plano
- 1st / 2nd Center Thickness (mm) : 6.0 / 3.0
- Edge Thickness (mm) : 8.0
- Materials : N-LAK22 / N-SF10
- 모델 사진



1-16. FC/APC Fiber Adapter Cap with Internal SM05 (0.535 inch-40) Threads, Narrow Key (2.0 mm)

- Connector Type : FC/APC, 2.0 mm Narrow Key
- Threading : Internal SM05 (0.535"-40)
- Designed with a 4° mechanical angle to compensate for the refraction angle of the output beam
- 모델 사진



1-17. FC/PC Fiber Adapter Cap with Internal SM05 (0.535 inch-40) Threads, Narrow Key (2.0 mm)

- Connector Type : FC/PC, 2.0 mm Narrow Key
- Threading : Internal SM05 (0.535"-40)
- 모델 사진



1-18. $f = 25.0$ mm, $\text{Ø}1/2$ inch Achromatic Doublet, ARC: 400 - 1100 nm

- Diameter (mm) : 12.7
- Focal Length / Back Focal Length (mm) : 25.0 / 21.89
- 1st / 2nd / 3rd Radius of Curvature (mm) : 19.1 / -17.8 / -82.3
- 1st / 2nd Center Thickness (mm) : 4.0 / 2.0
- Edge Thickness (mm) : 4.6
- Materials : N-LAK10 / N-SF57
- 모델 사진



1-19. $f = 19.0$ mm, $\text{Ø}1/2$ inch Achromatic Doublet, ARC: 400 - 1100 nm

- Diameter (mm) : 12.7

- Focal Length / Back Focal Length (mm) : 19.0 / 16.29
- 1st / 2nd / 3rd Radius of Curvature (mm) : 14.3 / -13.8 / -68.5
- 1st / 2nd Center Thickness (mm) : 4.0 / 1.0
- Edge Thickness (mm) : 3.2
- Materials : N-LAK10 / N-SF57
- 모델 사진



1-20. Adapter with External C-Mount Threads and Internal SMI Threads, 4.4 mm Spacer

- Adapters with Internal SMI and External Industry-Standard Threads
- Typical Application : Mount a C-Mount Camera Body to an SMI Lens Tube
- External Threads : C-Mount (1.00"-32)
- Internal Threads : SMI (1.035"-40)
- 모델 사진



1-21. Ø12.7 mm Optical Post, SS, M4 Setscrew, M6 Tap, L = 250 mm

- Material : 303 Stainless Steel
- One M4 Tapped Hole at Top and One M6 Tapped Hole at Base
- Removable Double-Ended M4 Setscrew
- Length : 250 mm
- 모델 사진



1-22. Adapter with External C-Mount Threads and Internal RMS Threads, 5.1 mm Long

- Adapters with External C-Mount (1.00"-32) and Internal Industry-Standard Threads
- Typical Application : Mount RMS Objective to Camera
- External Threads : C-Mount (1.00"-32)
- Internal Threads : RMS (0.800"-36)
- 모델 사진



1-23. Ø1 inch Fresnel Lens, $f = 25$ mm

- Used in Light Gathering, Illumination, and Homogenization Applications
- Focal Length (mm) : 25
- Diameter (mm) : 25.4
- Thickness (mm) : 1.5 mm
- Clear Aperture : >90% of Diameter
- Groove Spacing (mm) : 0.25
- Pitch : 10
- Design Wavelength (nm) : 588
- Refractive Index / Abbe Number : 1.49 / 55.3
- Substrate Material : Optical-Grade Acrylic
- 모델 사진



1-24. Adapter with External C-Mount Threads and External SMI Threads, 3.2 mm Spacer

- Adapters with External SMI and External Industry-Standard Threads
- Typical Application : Mount a C-Mount Camera Body to an Internally Threaded SMI Lens Tube
- External Threads : SMI (1.035"-40)
- External Threads : C-Mount (1.00"-32)
- 모델 사진



1-25. Ruled Reflective Diffraction Grating, 600/mm, 500 nm Blaze, 25 x 25 x 6 mm

- Dimensions (W x H x D) : 25 mm x 25 mm x 6 mm
- Blaze Wavelength (nm) : 500
- Grooves/mm : 600
- Blaze Angle : $8^{\circ} 37'$
- Dispersion : 1.65 nm/mrad
- High Grating Efficiency of 60% to 80% at the Blaze Wavelength
- Low Ghosting, $<0.5\%$ of Parent Line
- Aluminum Reflective Coating
- Soda Lime Glass Substrate with 300 to 1200 Grooves/mm
- 모델 사진



1-26. 16 mm Cage System, XY Translating Lens Mount for $\varnothing 1/2$ inch Optics

- Travel : ± 0.04 " (± 1.0 mm)
- Drive : M3 x 0.25 Fine Adjusters
- Hold $\varnothing 1/2$ " Optics up to 0.23 " (5.8 mm) Thick with Included SM05RR Retaining Ring
- $\varnothing 0.43$ " ($\varnothing 10.9$ mm) Clear Aperture with Retaining Ring
- Rear of SCP05 Compatible with $\varnothing 1/2$ " Lens Tubes
- 모델 사진



1-27. $\varnothing 1/2$ inch Linear Polarizer with N-BK7 Windows, 400-700 nm

- Operating Wavelength Range : 400 - 700 nm
- AR Coating Range : 350 - 700 nm
- Reflectance over Coating Range (Avg.) : $< 0.5\%$ at 0° AOI
- Extinction Ratio : $> 100:1$ (400 - 500 nm), $> 1000:1$ (500 - 700 nm), $> 5000:1$ (530 - 690 nm)
- Size : $\varnothing 1/2$ "
- Thickness : 2.1 mm
- Dimensional Tolerance : ± 0.2 mm
- Transmitted Wavefront Distortion : λ at 633 nm
- 모델 사진



1-28. Compact Cage Assembly Rod, 1 inch Long, Ø4 mm, 4 Pack

- For use with 16 mm Compact Cage Systems
- Available in Lengths Ranging from 1"
- Ø4 mm Precision-Ground Stainless Steel Rods
- 4-40 Removable Setscrew at Both Ends
- 모델 사진



1-29. SMA Fiber Adapter Plate with External SM05 (0.535 inch-40) Threads

- Connector Type : SMA
- Threading : External SM05 (0.535"-40)
- Light-Tight Construction When Used with SM05 Lens Tubes
- Compatible with Many of Our 16 mm Cage Plates
- Designed with a 4° mechanical angle to compensate for the refraction angle of the output beam
- 모델 사진



1-30. $f=30$ mm, $\text{Ø}1/2$ inch Achromatic Doublet, SM05-Threaded Mount, ARC: 400-700 nm

- Diameter (mm) : 12.7
- Focal Length / Back Focal Length (mm) : 30.0 / 27.5
- Working Distance (mm) : 25.1
- 1st / 2nd / 3rd Radius of Curvature (mm) : 17.9 / -13.5 / -44.2
- 1st / 2nd Center Thickness (mm) : 3.5 / 1.5
- Edge Thickness (mm) : 3.4
- Materials : N-BK7/SF2
- 모델 사진



1-31. Compact Cage Assembly Rod, 2 inch Long, $\text{Ø}4$ mm, 4 Pack

- For use with 16 mm Compact Cage Systems
- Available in Lengths Ranging from 2"
- $\text{Ø}4$ mm Precision-Ground Stainless Steel Rods
- 4-40 Removable Setscrew at Both Ends
- 모델 사진



1-32. 16 mm Cage Cube-Mounted Non-Polarizing Beamsplitter, 400 - 700 nm, M4 Tap

- 16 mm Cage System and SM05 Lens Tube Compatible Mounts
- AR Coating Range : 400 - 700 nm
- 50:50 T-S Split Ratio
- Performance : $T_{\text{avg}} = 47 \pm 10\%$, $R_{\text{avg}} = 47 \pm 10\%$, $T_{\text{avg}} + R_{\text{avg}} > 85\%$,
 $T_{\text{avg}} + R_{\text{avg}} > 90\%$, $|T_s - T_p| < 10\%$, $|R_s - R_p| < 10\%$

- Beamsplitter Material : N-BK7
- Max Transmitted Beam Deviation : < 5 arcmin
- Clear Aperture : $\varnothing 12.5$ mm
- 모델 사진



1-33. $f=50$ mm, $\varnothing 1/2$ inch Achromatic Doublet, SM05-Threaded Mount, ARC: 400-700 nm

- Diameter (mm) : 12.7
- Focal Length / Back Focal Length (mm) : 50.7 / 47.2
- Working Distance (mm) : 44.6
- 1st / 2nd / 3rd Radius of Curvature (mm) : 27.4 / -22.5 / -91.8
- 1st / 2nd Center Thickness (mm) : 3.5 / 1.5
- Edge Thickness (mm) : 4.0
- Materials : N-BK7/SF2
- 모델 사진



1-34. $\varnothing 1/2$ inch Wedged N-BK7 Window, Uncoated

- Wedge Angle : 30 ± 10 arcmin
- Diameter : $1/2$ " (12.7 mm)
- Thickness : 3.0 mm
- Clear Aperture : $\geq \varnothing 11.43$ mm
- Surface Flatness : $\leq \lambda/20$ Over Central $\varnothing 5$ mm, $\leq \lambda/10$ Over Entire Clear Aperture
- Wavelength Range : 350 nm - 2.0 μ m (Uncoated)
- Substrate : N-BK7

- 모델 사진



1-35. Compact Cage Assembly Rod, 1.5 inch Long, Ø4 mm, 4 Pack

- For use with 16 mm Compact Cage Systems
- Available in Lengths Ranging from 1.5"
- Ø4 mm Precision-Ground Stainless Steel Rods
- 4-40 Removable Setscrew at Both Ends
- 모델 사진



1-36. SM05 Threaded Kinematic Cage Mount, Ø1/2 inch Optics, Metric

- Kinematic Mounts for Ø1/2" (Ø12.7 mm) Optics
- Provides $\pm 2.5^\circ$ Kinematic Tip and Tilt Adjustment
- SM05 (0.535"-40) Threaded Mounting Bore for Thin Optics
- 16 mm Cage Compatible
- Post Mountable: Two #8-32 (M4) Tapped Holes
- 모델 사진



1-37. Ø1/2 inch Protected Aluminum Mirror

- Diameter : 1/2" (12.7 mm)
- Thickness : 6.0 mm (0.24")
- Reflectance : Ravg >90% from 450 nm - 2 µm, Ravg >95% from 2 - 20 µm
- Substrate : Fused Silica
- Flatness (Peak to Valley) : $\lambda/10$ @ 633 nm
- Parallelism : <3 arcmin
- Clear Aperture : >90% of Diameter
- 모델 사진



1-38. 16 mm Cage Rotation Mount for Ø1/2 inch Optics

- Mount Ø1/2" Optics up to 0.24" Thick in a 16 mm Cage System
- 360° Continuous Rotation Lockable via 0.05" (1.3 mm) Hex Setscrew
- 2° Graduations on Dial
- Rotation Carriage with SM05 (0.535"-40) Threads
- Ø0.45" (Ø11.4 mm) Clear Aperture with Included SM05RR Retaining Ring
- 모델 사진



2. 기타사항

가. 납품위치 : 경북 구미시 구미대로 350-27 XR 디바이스 개발 지원센터 202호

나. 납품개요 : 규격서의 조건에 맞는 시제품 납품

다. 납품기한 : 계약일로 부터 14일 이내

라. 계약의 이행

- 1) 본 규격서에 대한 주계약자(이하 “계약자” 라 한다)와 발주기관 간의 해석상 이견은 발주기관의 해석에 따라야 하며, 본 규격서에 특별히 명시되지 않은 사항은 정부계약법 등의 규정과 일반 관례에 따른다.

- 2) 발주기관은 계약내용 전부에 대한 권리를 행사할 수 있으며 계약자는 이에 대하여 전

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- 3) 본 규격서에 명시된 모든 조항은 본 사업의 원활한 추진에 필요한 최소한의 사항만을 규정하였으므로 상세히 기술하지 않았거나 누락된 사항에 대해서도 정상운영 및 서비스에 문제가 발생되지 않도록 계약자는 사전 조치를 취하여야 한다.
- 4) 본 규격서에서 요구하는 성능 및 특성에 대해 계약자의 오인 또는 누락된 상태로 계약 체결되어, 계약 후 이를 보완하기 위한 설계 변경, 물품 등을 추가해야 할 경우 계약자 부담으로 시행한다.
- 5) 계약자는 공급하는 제품의 성능, 품질 등에 대한 최종적인 책임을 진다.

마. 하자보증기간 : 납품 후 1년

바. 규격관련 문의사항 : 광융합디스플레이연구센터 정세화 연구원 (054-460-9054)