

## SPECIFICATIONS

### Standard Lens

#### MODEL NO. DOS-M180-6FL-EC

#### Optical:

- 1.1 - Lens Design - Maksutov Cassegrain
- 1.2 - Clear Aperture - 180 m.m. (7 inches)
- 1.3 - Focal Length - Selectable - 6 discrete positions
- 1.4 - Geometrical f/ratio - proportional to E.F.L.  
(listed under Focal Length Selector)
- 1.5 - Image Format - 12.5 m.m. to 16 m.m. diagonal
- 1.6 - Coatings - Reflective surfaces - aluminum coating with quartz overlay.  
All air-glass surfaces AR coated with MgF<sub>2</sub>.
- 1.7 - Resolution 0.7 Arc Seconds:
  - 400 mm F.L. = 690 LP/mm
  - 600 mm F.L. = 460 LP/mm
  - 1000 mm F.L. = 277 LP/mm
  - 1800 mm F.L. = 154 LP/mm
  - 2400 mm F.L. = 115 LP/mm
  - 4800 mm F.L. = 58 LP/mm
- 1.8 - Primary Mirror - Pyrex
- 1.9 - Corrector Lens - BK-7 Glass
- 1.10 - Baffling - Secondary and Auxiliary baffling with all surfaces treated to control grazing incidence light.

#### Focusing:

- 2.1 - Electronic, Microprocessor Controlled
- 2.2 - Transiting Mirror Design
- 2.3 - Focus Range -
  - 400 m.m. 75 m.m. to Infinity
  - 600 m.m. 75 m.m. to Infinity
  - 1000 m.m. 500 m.m. to Infinity
  - 1800 m.m. 1000 m.m. to Infinity
  - 2400 m.m. 1000 m.m. to Infinity
  - 4800 m.m. 1000 m.m. to Infinity

- 2.4 - System Power – Lens required 24V., D.C. (+/- 2v) at minimum 5 A to allow multiple functions to sequence simultaneously.
- 2.5 - Limit Stops - Electrical limit switches are provided to prevent over-travel in either direction. Near and Far focus is controlled via motor polarity.

#### Neutral Density Filter System:

- 3.1 - Matched set of counter-rotating variable neutral density filter wheels which provide even illumination over the entire format.
- 3.2 - Density Range - (Clear) 0.0 to 4.0 continuously variable.
- 3.3 - Integrated with video signal driven Auto-Iris and manual override capability.
- 3.4 - Drive Motor - 24V DC, 100 (ma) maximum current.
- 3.5 - Limit Stops - Electrical limit switches will actuate at clear and at maximum density to prevent over-travel. Polarity reversal will change motion from dark to clear and vise-versa.

#### Six Focal Length Selector:

- 4.1 - Six Port Focal Length Lens Wheel, provided 6 effective focal lengths of:  
400 mm (15.75 in.) f/2.2, 600 mm (23.62 in.) f/3.3,  
1000 mm (39.4 in.) f/5.5, 1800 mm (70.86 in.) f/10,  
2400 mm (94.5 in.) f/13.3, 4800 mm (189 in.) f/26.6
- 4.2 - All focal lengths become par/focal via microprocessor controlled moving mirror position.
- 4.3 - Focal length selection is via numbered push buttons on the supplied controller.

#### Mechanical Specifications:

- 5.1 - Weight of System Less Camera: 62 pounds
- 5.2 - Length of System: 37.5 inches (95.25 cm)
- 5.3 - Height of Bottom Platform to Top of Unit: 10.45 inches (26.54 cm)
- 5.4 - Height of Optical Axis above Top of Platform: 5.625 inches (142.8 m.m.)
- 5.5 - Camera Mount: Platform Support with slip in "C" mount adapter.
- 5.6 - Materials of Construction: Aluminum alloy with stainless steel fasteners. Pyrex and optical glass optical system.