



PlaneWave CDK17

The latest member of the CDK family is the CDK17. The CDK optical design is the innovative solution for unsurpassed astro-imaging quality at an affordable price.

Invented by Dave Rowe, the purpose of the design is to provide a telescope that will excel at imaging with large format CCD cameras while remaining superb for visual use. The CDK design far exceeds the off-axis performance of most commercial telescope designs including the Ritchey-Chretien design. The RMS Spot sizes at the edge of a 35mm full frame remain smaller than a single pixel of a CCD camera. This no-compromise design is unique in making the optical alignment very forgiving and collimation very easy. This guarantees the user will be sure to get the best performance out of the telescope possible. The end result at the image plane of the CDK design is no off-axis coma, no off-axis astigmatism, and a perfectly flat field all the way out to the edge of a 52mm image circle. All this means, the stars will be pinpoints from the center of the field of view out to the corner of the field of view.

www.planewave.com

FEATURES & SPECIFICATIONS

SYSTEM

Aperture	17" (.43m)
Focal Length	2939mm
Focal Ratio	f/6.8
Central Obstruction	39%
Back Focus	8.8" from Backplate, 5.8" from Racked in Focuser
Weight	94 lbs
OTA Length	37"
Upper Cage	Carbon Fiber Truss
Lower Cage	Carbon Fiber Truss with Carbon Fiber Light Shroud
Performance	6.5 micron rms @ 21 mm and 9.6micron @26mm off-axis (730, 585, 430nm)

PRIMARY MIRROR

Diameter	17.5"
Aperture	17"
Focal Ratio	f/2.6
Material	Precision Annealed Pyrex
Shape	Prolate Ellipsoid
Coating	Enhanced Multi-layer Aluminum Coatings

SECONDARY MIRROR

Diameter	6.25"
Material	Precision Annealed Pyrex
Shape	Spherical
Coating	Enhanced Multi-layer Aluminum Coatings

LENS GROUP

Diameter	90mm
Number of lenses	2
Coating	High Transmission Anti-reflective Coatings

STANDARD FEATURES

Dual Carbon Fiber Truss Design: Minimizes thermal expansion which causes focus shift with changes in temperature.

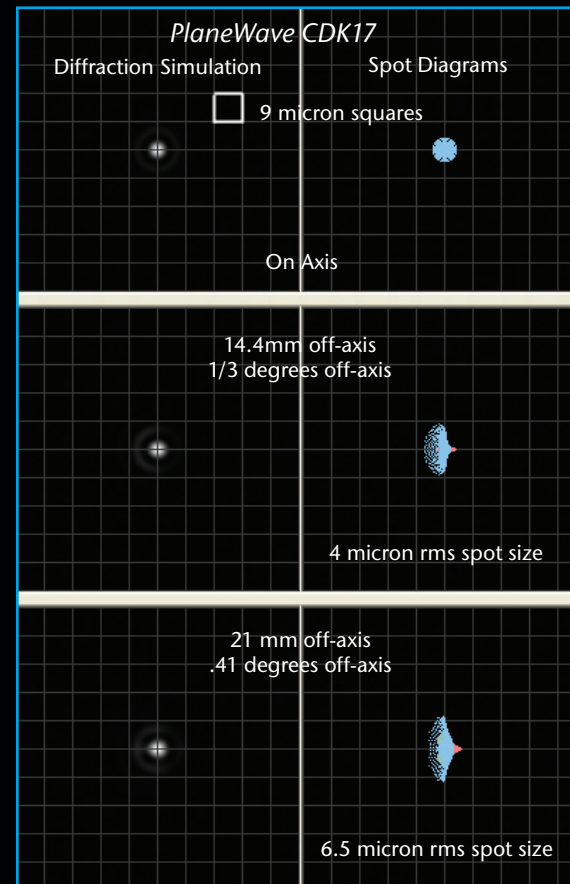
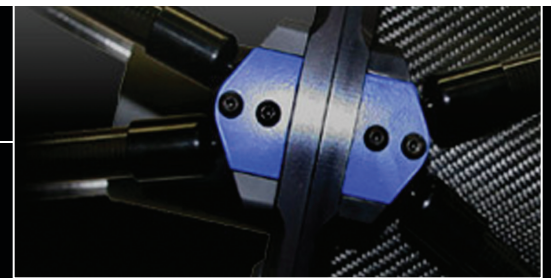
Carbon Fiber Lower Light Shroud: Protects the primary mirror from damage and from stray light.

Dovetail Expansion Joint: Allows the aluminum dovetail to thermally expand differently than the carbon fiber lower truss without flexure.

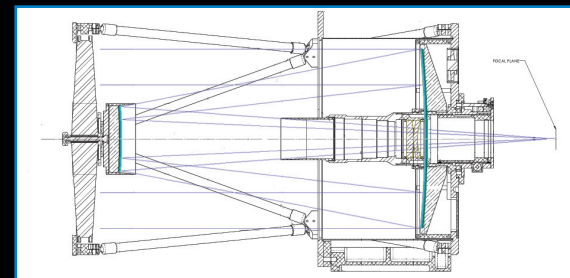
Dovetail: The massive PlaneWave dovetail supports the optical tube to provide rigidity. A mating dovetail clamp is available to mount on various mounts.

3.5" Hedrick Focuser: Heavy duty no-slip focuser. The focus draw tube runs on 5 bearings and is driven by a lead screw so there is no chance of slipping. The draw tube travel is 1.3".

Cooling Fans: Three fans blow out of the optical tube pulling air through the telescope and by the primary mirror. This helps the telescope to equilibrate quickly. The fans are controlled by a switch on the optical tube or can be controlled by a computer if the optional Electronic Focus Accessory (the EFA Kit) is purchased.



RGB = 730, 585, 430 nm Simulation is for a flat field.



CDK 17 Optical Design



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