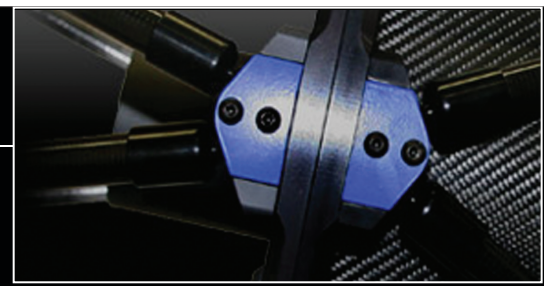




PlaneWave CDK 12.5

The CDK optical design is now available in a smaller and even more affordable aperture. The CDK optical design is the innovative solution for unsurpassed astro-imaging quality at an affordable price. 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-Chrétien design. The RMS spot sizes at the edge of a 35mm frame remain smaller than a single pixel on the most advanced CCD cameras available to amateurs today. 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.

FEATURES & SPECIFICATIONS



SYSTEM

Aperture	12.5" (.32m)
Focal Length	2541mm
Focal Ratio	f/8
Central Obstruction	39%
Back Focus	10.45" from Backplate, 7.2" from Racked in Focuser
Weight	46 lbs
OTA Length	31.5"
Optical Tube	Carbon Fiber
Performance	11 micron RMS spots 25mm off-axis

PRIMARY MIRROR

Diameter	13"
Aperture	12.5"
Focal Ratio	f/3
Mounting	Laser Collimated and Permanently Fixed
Material	Precision Annealed Pyrex
Shape	Prolate Ellipsoid
Coating	Enhanced Multi-layer Reflective Coatings

SECONDARY MIRROR

Diameter	4.65"
Material	Precision Annealed Pyrex
Shape	Spherical
Coating	Enhanced Multi-layer Reflective Coatings

LENS GROUP

Diameter	70mm
Number of lenses	2
Coating	High Transmission Anti-reflective Coatings

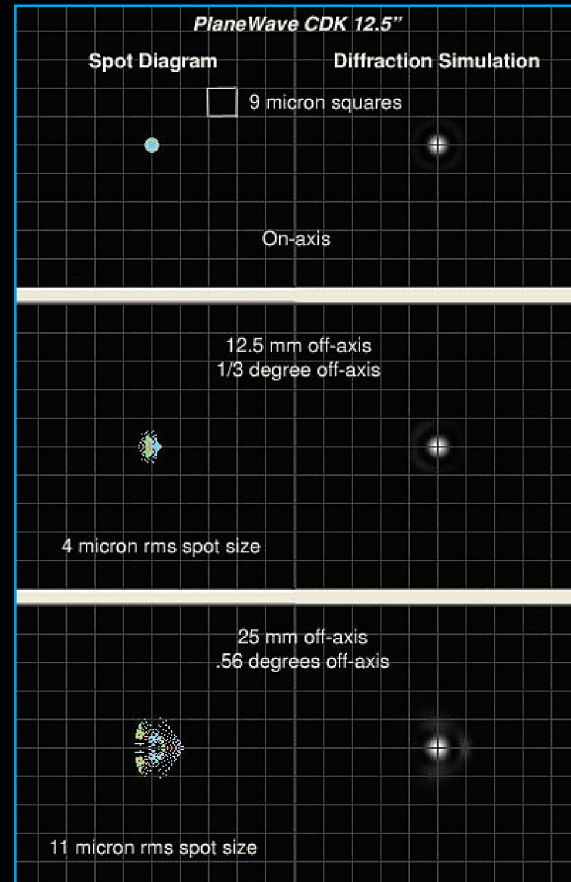
STANDARD FEATURES

Carbon Fiber Tube: Minimizes thermal expansion which causes focus shift as the temperature changes. The closed tube also protects the primary mirror and minimize dew.

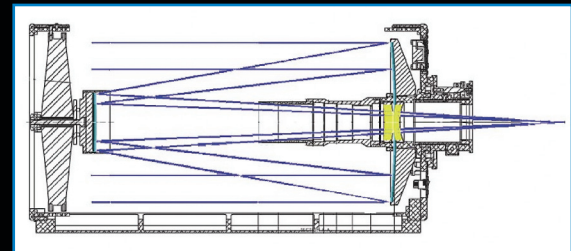
Dovetail Expansion Joint: Allows for the difference in thermal expansion between carbon fiber tube and the aluminum dovetail. The expansion joint allows the aluminum dovetail to expand and contract without stressing telescope.

2.75" Hedrick Focuser: Heavy duty no-slip focuser. The focus tube runs on 5 bearings and is driven by a leadscrew so there is no chance of slipping. It accepts an optional dial indicator and PlaneWave's Electronics Focus Accessory (EFA Kit) to control many electronic accessories. The focus 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 = 720, 585, 430 nm Simulation is for a flat field.



CDK 12.5 Optical Design



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