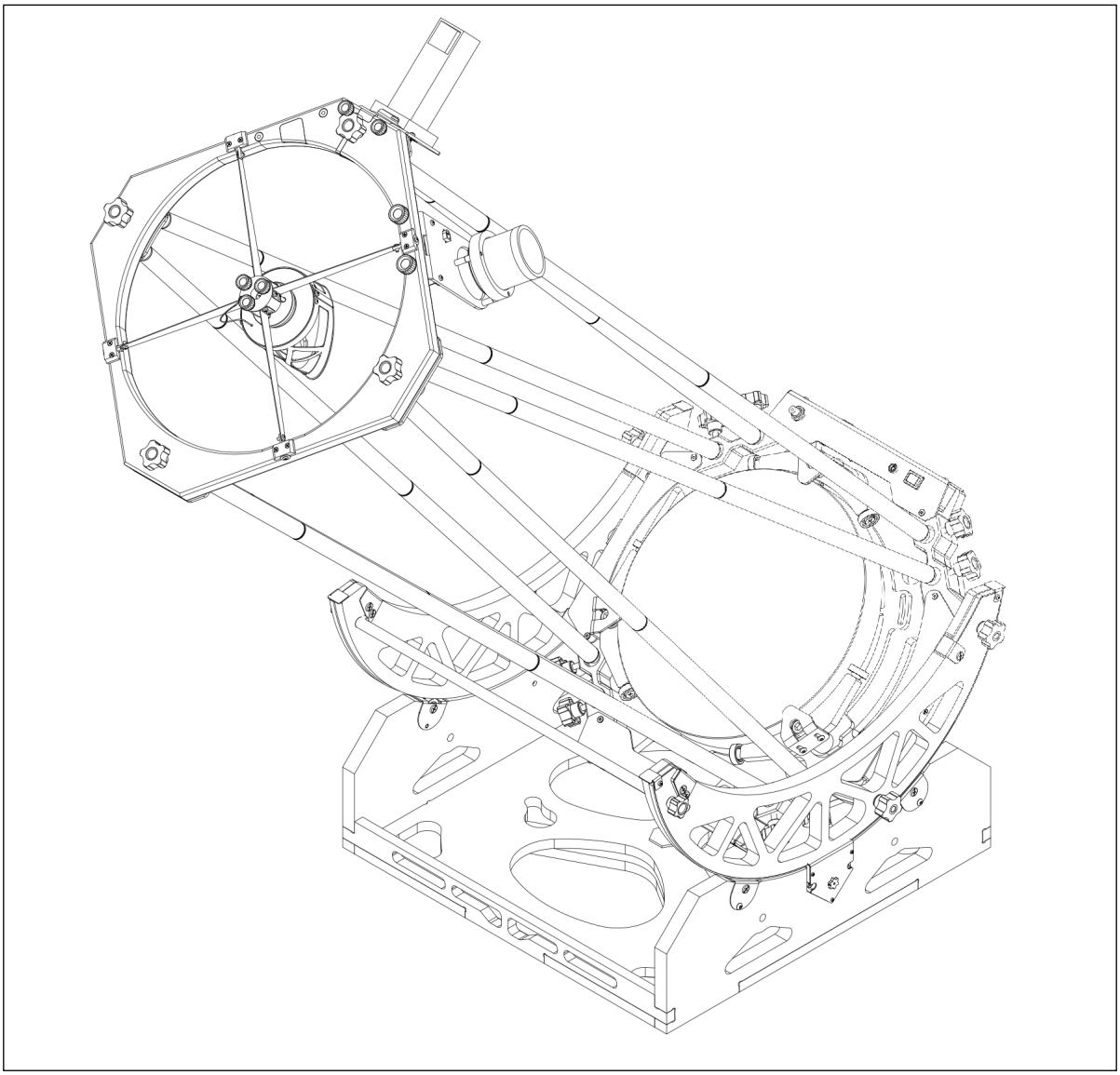
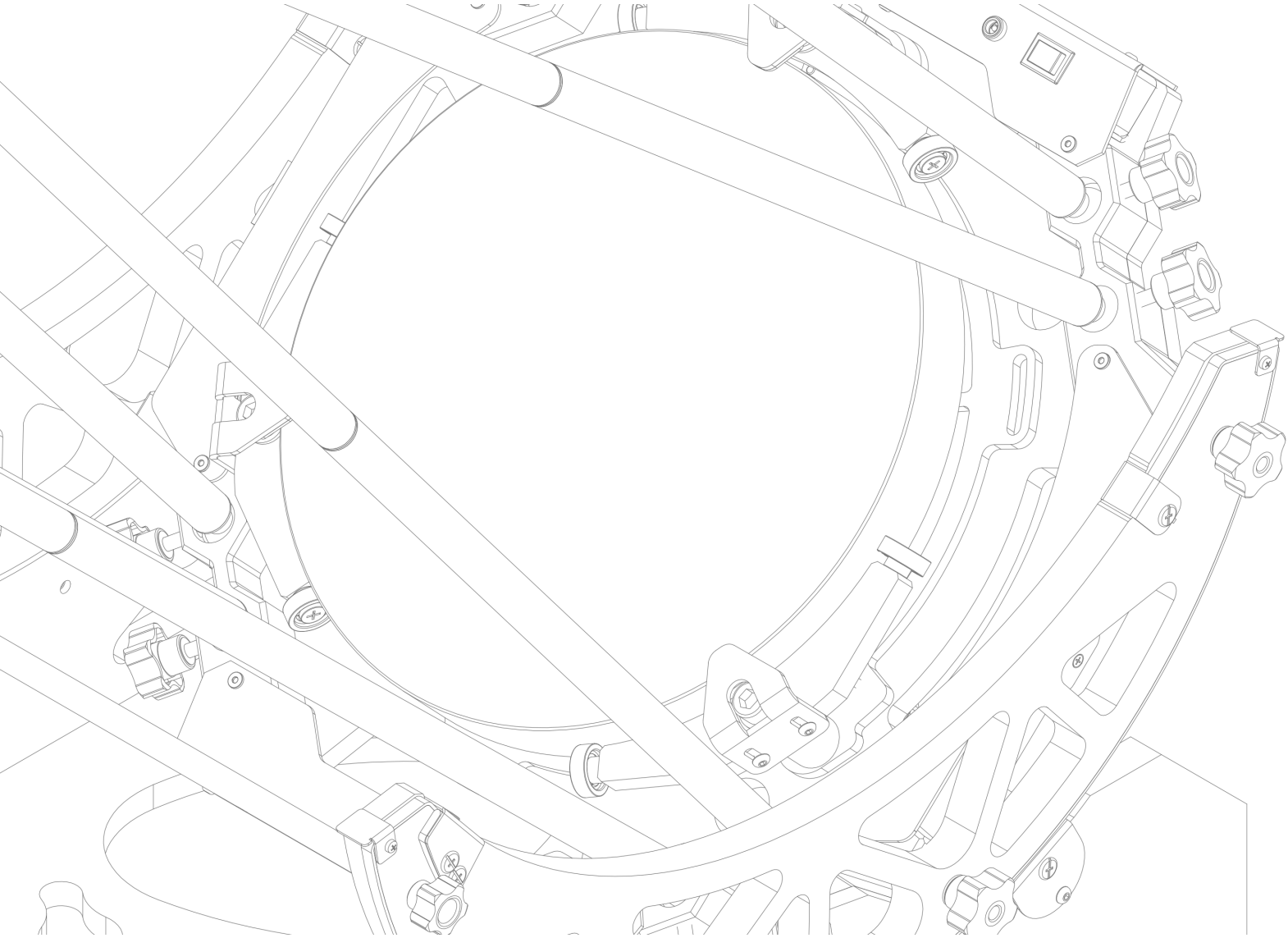


12.50” f/4.5 - Ultra Compact True Travel Dobsonian Telescope - Specification Sheet

Last Edited on: 18th June 2025



TELESCOPE - TECHNICAL SPECIFICATIONS

Images shown are for representation only. Actual product design may vary as part of ongoing improvements and may not exactly match the illustration in this data sheet.

Primary Mirror Specifications:

1	Mirror Supplier: (Options Available)	Zambuto Optical Company, Ostahowski Optics/ GSO optics (Taiwan)
2	Mirror Type:	Parabolic mirror
3	Coating type:	Metal
4	Coating:	Enhanced Aluminum with SiO_2 protection layer
5	Coating Specification:	Ravg >95% @ 450-750nm
6	Mirror Diameter:	12.5” (+0.0024/-0)” / 317.5mm (+0.06/-0)mm
7	Mirror weight:	12.46lb ± 0.22lb/ 5650g±100g
8	Mirror Substrate: (Options available)	Schott SUPREMAX® or Quartz
9	Substrate Cost: (Raw material cost of substrate glass -annealed)	$1900
10	Edge Thickness ET:	1.26”±0.2”/32mm±5mm
11	Focal Length:	50”/1270mm
12	Radius of Curvature:	100”/2540mm
13	Aperture (f/#):	f/4
14	Surface Quality: (Scratch to Dig)	10μm-5μm or better
15	Surface Accuracy:	λ/10 or better
16	Wavelength Range:	0.45μm-0.75μm
17	Back Surface:	Ground*
18	Damage Threshold, Reference:	0.2 J/cm² @ 532nm, 10ns
19	ROHS Compliance:	Applicable
20	Spherical Aberration:	Negligible for both high order and low order
21	Astigmatism:	Undetectable at eyepiece
22	Primary Ripple:	Non existent at eyepiece

Secondary Mirror Specifications:

1	Mirror Supplier: (Options Available)	Antares Optics/ Ostahowski Optics
2	Mirror Type:	Flat
3	Coating Type:	Metal
4	Coating Specification:	Ravg >97% @ 450 - 750nm
5	Coating material:	Enhanced Aluminium (450-750nm)
6	Substrate: (Options available)	Fine Annealed Schott SUPREMAX® 33 or Quartz
7	Weight:	5.044oz/143g
8	Thickness:	0.51”/13mm
9	Thickness Tolerance:	±0.060”/±1.52mm*
10	Minor Axis:	2.76”/70mm
11	Major Axis:	3.9”/99mm
12	Dimensional Tolerance:	±0.02”/±0.50mm
13	Surface Flatness (peak to valley):	1/10 - 1/15 P-V | 1/35 RMS
14	Wavelength Range:	450nm-1000nm

Telescope structure specifications:

1	Telescope height at zenith:	59”/1500mm
2	Eyepiece height at zenith:	51”/1300mm
3	Total telescope weight (A+B+C+D+E)	41lb/18,7kg
4	Optical tube assembly: (A+B+C)	29.67lb/13.45kg
5	Upper tube assembly:(A)	3.97lb/1.8kg
6	Lower tube assembly: (B)	22.046lb/10kg
7	Truss tube assembly: (C)	3.66lb/1.66kg
8	Altitude Bearing assembly: (D)	2.74lb/1.2kg
9	Rocker box assembly: (E)	8.82lb/4kg
10	Primary mirror weight:	12.35lb±0.22lb/ 5600g ±100g
11	Secondary mirror weight:	0.32lb ± 0.033lb/ 143g ± 15g
12	Theoretical Altitude motion range:	0° to 95°
13	Azimuth motion:	Unlimited rotation ↻ and ↺
14	OTA mounting system:	Dobsonian-Hydraulic Motion Control in altitude, PTFE Bearing in azimuth
15	Mirror box, Rocker and secondary cage material:	Baltic birch exterior grade - coated for waterproofing. (BWR)
16	Primary mirror cell:	6 Point floatation cell with active whiffle tree edge supports
17	Secondary mirror cell:	4 point uniform micro force technology
18	Secondary mounting system:	Magnetic auto- indexing secondary mirror cell
19	Focuser - Kine Optics USA— Light weight focuser:	HC-2A - Included
20	Digital setting circle: (NEXUS DSC)	User mod friendly—- upcoming soon
21	GO TO functionality:	User mod friendly — upcoming soon
22	DSC Encoders	Nexus DSC based — upcoming soon
23	Truss poles technology:	3 Piece split truss system with a total of 8 Truss Poles.

Telescope structure specifications (continued):

24	Truss pole:	Carbon Fiber 3k Rolled
25	Travel case:	ATA travel case with internal foam
26	Secondary Light Baffle	Upcoming soon
27	DSC	Nexus DSC - upcoming soon
28	Operational temperature:	32℉ to 95 ℉ / 0°C to +35°C
29	Storage temperature:	-22 ℉ to 149 ℉ / -30°C to + 65°C
30	Optical coating durability (under non corrosive, 25%-65% Relative humidity and dust free conditions(0.1ppm or less)) as per ISO 9211-3:2008 ISO 9211-2:2008 and ISO 15380:1999:	10 years*
31	Efficiency of the OTA system in % light output (Calculated as reflectivity of primary mirror X reflectivity of secondary mirror):	90-94% in 450-1000nm range
32	Customer Service (worldwide):	Paid service (Online)
33	After Market Spares (WORLDWIDE SHIPPING):	Paid service
34	Lowest useful magnification:	45X
35	Field of view (lowest magnification) with 68° AFOV eyepiece:	1.51°
36	Highest useful magnification:	625X
37	Field of view (highest magnification) with 68° AFOV eyepiece:	0.109°/6.54 arc minutes
38	Faintest Stellar Magnitude:	14.73 under ideal conditions
39	Resolving power	0.435 arc seconds
40	Practical Eyepiece weight limit at zenith (90°)	2lb / 0.91kg
41	Practical Eyepiece weight limit at 45°altitude	1lb / 0.45kg
42	Practical Eyepiece weight limit at 20° altitude	4ounce / 0.11kg
43	Lowest useful pointing angle	+20° altitude
44	Highest useful pointing angle	+95° altitude
45	Suggested highest magnification (For Beginners)	350X

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