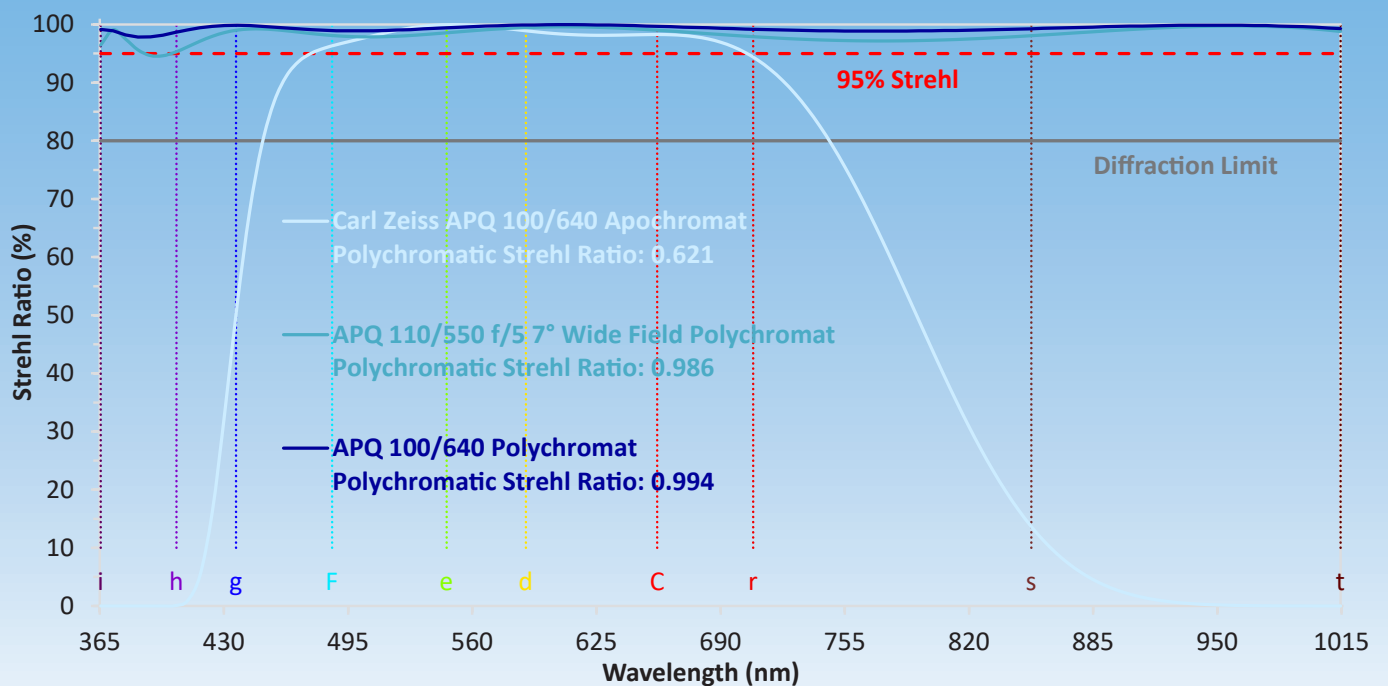


# APQ 100/640 Fluorite Quadruplet Polychromat

APQ



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Compact polychromatic refractor with fast focal ratio and travel-ready dimensions.

## Features

- UBVRl Fluorite Quadruplet Polychromat
- Four lens aspherical design
- System correction by precision optics master
- CaF<sub>2</sub> lens protected between glass lenses
- Oil spaced without air gaps
- Ultra broad band antireflection coating
- Objective in compensation cell
- Objective adjustable
- Retractable and lockable dew cap
- Feather Touch Focuser FTF3545
- Depending on the observation task, the basic system is combined with the special field corrector, focal reducer corrector or Barlow system

## Description

- The APQ 100/640 Fluorite Quadruplet Polychromat does not show any decrease of the Strehl ratio near or below the diffraction limit in the peripheral regions of the visual spectrum, as is the case with most apochromats.
- Due to its polychromatic correction, the 100/640 CaF<sub>2</sub> Quadruplet is the first astronomical optics that exploit the full UBVRl spectral range (365nm – 1014nm) of modern electronic sensors (CCD, CMOS).
- We source the high-quality fluorite blanks with special parameters in selected quality from a certified manufacturer, which also supplies the global players of precision optical equipment with CaF<sub>2</sub> raw material for the production of stepper lenses for VUV photolithography.
- The surfaces of the objective lenses made of three different special optical glasses of SCHOTT® or OHARA® and CaF<sub>2</sub> are precision machined, a lens surface is an asphere.
- Because every fabrication can only be done with finite precision, even the latest technologies and state-of-the-art CNC precision machining processes are subject to errors. All manufacturing parameters must therefore be tolerated conscientiously.
- The required high image quality is achieved by a final system correction, which is performed by a precision optics master with decades of experience in his field.
- Thanks to a novel compensation cell, the lenses of the completely oil spaced objective (without air gaps) are held in stable position with fluctuations in temperature.
- The thermal equilibrium sets in quickly and rattling of lenses in the cell with all negative consequences is prevented.
- The objective can be adjusted precisely to the optical axis of the OTA.
- The CNC precision machining of lens cell, dew cap and telescope tube ensures the required high centering accuracy.
- Inside the OTA, a defined surface structure and a diaphragm system in combination with an antireflective coating of all internal surfaces effectively prevent the occurrence of scattered light and tube reflections.
- The over 100mm sliding dew cap, which can be clamped in any position, takes into account the

## Specification

<b>Objective APQ 100/640</b>	Fluorite Quadruplet Polychromat
Optical design	four lens aspherical design
Coupling technique	completely oil spaced without air gaps
Mounting type	compensation cell
Cell material	high quality aluminum and stainless steel alloys
Polychromatic Strehl ratio	≥ 0.95 (365nm – 1014nm)
Maximum focal shift range	±0.003% (365nm – 1014nm)
Anti-reflection coating	Ultra-ARB R <sub>AVG</sub> < 0.7% (365nm – 1014nm)
Clear aperture	100mm
Focal length	640mm
Focal ratio	f/6.4
Image scale	5.371"/mm or 0.186mm/'
Resolution	1.14" (theoretical)
Magnification range	17x – 300x (exit pupil 6mm – 0.33mm)
Test protocol	optical inspection certificate
<b>Tube assembly 100/640</b>	high quality aluminum and stainless steel alloys
Tube and dew cap colors	silver metallic / black metallic
Tube diameter	Ø136mm
Telescope length (dew cap and focuser)	487mm / 701mm (retracted / extended)
Dew cap diameter	Ø156mm
Dew cap length	226mm
Dew cap sliding range	100mm
Backfocus	200mm
<b>Focuser</b>	Feather Touch FTF3545
Clear diameter	Ø90.2mm (3.55")
Focusing range	114.3mm (4.5")
Lifting capacity	8.1 – 9.1kg (18 – 20lb)
Reduction ratio	10:1
360° rotatable and lockable	yes
Motorized drive as option	yes
Weight	2.7kg (6lb)
<b>OTA APQ 100/640 Polychromat</b>	objective, tube assembly, dew cap, focuser
Adapter	S88 Quick Changer
Dust-covers	covers to protect the lens and tube
Weight (including focuser)	< 7kg (15.4lb)

maximum image field diameter of the field corrector and focal reducer corrector. On the dew cap the label Polychromat 100/640, the brand logo APQ as well as the indication of origin Made in Germany are applied.

- At the end of the refractor, the Feather Touch focuser FTF3545 from Starlight Instruments is mounted with a Quick Changer with S88 dovetail.
- The Feather Touch focuser is rotatable by 360°, so that it can always be turned into the desired position. The dual-speed mechanism with coarse and fine drive has a reduction ratio of 10:1.
- The eye-catching color of the OTA stands out significantly from the general standard white and gives the APQ JENA Polychromat a unique and distinctive design with a high value of brand recognition.
- The APQ 100/640 Fluorite Quadruplet Polychromat is a premium refractor that is predestined for all types of observations – visual and photographic.

## Recommended Accessories

- Field Corrector
- Focal Reducer Corrector
- Barlow system
- Tube Rings
- Mounting Plate
- Steering Wheel
- Tube Cap
- Carrying Handle
- Quick Changer
- Change Rings
- Extension Tubes
- Adapters
- Covers

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