



S4/i[®]

T2.0 Prime Lenses



It's All About the Detail

Award winning Cooke S4/i Prime Lenses were designed and developed in close technical collaboration with industry professionals. They are colour-matched and compatible with Cooke 5/i, miniS4/i, Panchro/i Classic, S7/i and Anamorphic/i lenses.

Cooke S4 optics offer superb optical and mechanical performance, control of flare, distortion, veiling glare and spherical aberrations at full aperture. The cam-type focus mechanism allows for smooth focus adjustments. Modular construction increases ease of maintenance and serviceability.

/i[®] Technology

Each of our S4/i prime lenses are supplied with /i Technology and are designed for all PL mounted professional motion picture film and electronic cameras. Cooke's /i Technology provides cinematographers and camera operators with vital information on lens setting, focusing distance, aperture and depth-of-field, hyperfocal distance, serial number, owner data, lens type and focal length in both metric and footage measurements. All the information can be captured frame-by-frame for real-time display and for use in post-production.

Feature Highlights

- Lenses available: 12, 14, 16, 18, 21, 25, 27, 32, 35, 40, 50, 65, 65SE*, 75, 75SE*, 100, 135, 150, 180 and 300mm
- *Soft focus attachment
- T2.0 to T22 aperture
- Linear iris
- /i[®] Technology for lens metadata capture included as standard
- The Cooke Look[®] and colour matched with all other Cooke lenses
- Control of flare, distortion, veiling glare and spherical aberrations at full aperture
- Optional uncoated lenses
- Award-winning cam-type focus mechanism allows for smooth focus adjustments
- Superb optical and mechanical performance
- Modular construction increases ease of maintenance and serviceability

Cooke S4/i[®] Technology Lens Awards

- 1998** Cinec Award for Technical Excellence, Germany
- 1999** Academy of Motion Picture Arts and Sciences Scientific and Engineering Award for Optical and Mechanical Design
- 2000** Primetime Emmy Award for Outstanding Achievement in Engineering Development
- 2001** Two Queen's Awards for Enterprise - International Trade and Innovation, England
- 2001** Winner, Exporter of the Year, 2001 International Business Award, Export Times and Trade Partners UK
- 2001** Winner, Product Innovation, 2001 International Business Award, Export Times and Trade Partners UK
- 2007** NAB2007 Premiere Product Award – S4/i System



Cooke S4/i[®] Technical Specifications



**Optional Uncoated
Elements Available**

Optical Design

The optics are designed to give maximum performance at full aperture with superior control of flare, distortion and spherical aberration.

$\frac{1}{8}$ Technology

Accessible via cable connector near the lens mount and contacts in mount that sync with $\frac{1}{8}$ compatible cameras.

Colour Balance

All S4/i prime lenses are colour balanced, color-matched and compatible with Cooke 5/i, miniS4/i, Panchro/i Classic, S7/i and Anamorphic/i.

T2 Aperture

All Cooke S4/i Primes have a true T2 aperture and cover Super 35mm format.*
*Apart from the 300mm (2.8)

Index Marks

Every index mark is labelled. More detailed markings allow for more detailed focus control.

Focus Movement

Our Academy Award[®] winning cam-style focus movement, coupled with the added benefit of a large lens barrel diameter, has allowed for an increased number of focus markings, particularly at close focus. Spherical aberration has been controlled throughout the range of focal lengths to eliminate the need to compensate for changes in back focus with aperture. A four-point contact bearing provides a smooth positive backlash-free movement.

Camera Mounts

Cooke Hardened PL Mount with $\frac{1}{8}$ Technology contacts.

Focus Scaling

Large, clear numerals on both sides of the focus barrel benefit the focus puller when shooting under difficult lighting conditions.

Compatibility

All Cooke S4/i Primes have a common fixed front diameter of 110mm, (except for 12mm, 150mm, 180mm, 300mm) with a focus drive gear of 140T x 0.8 mod and an iris drive gear of 114T x 0.8.

External Finish

A scratch resistant PTFE hard anodised finish is provided on all Cooke lenses, providing a durable, hard-wearing surface to meet the most demanding environmental conditions.

Iris

An eight-leaf linear module iris assembly is fitted into the Cooke S4/i Primes with an aperture range of T2 to T22. (Except 300mm)

Weight/Size Ratio

The lenses are designed for all shooting applications, including handheld and Steadicam, providing comfortable balance ratio with the latest compact cameras.

Reliability and Service

The Cooke S4/i Prime lenses are designed to meet a market requirement for fully reliable performance with a minimum of downtime.

Cases Available

Cooke S4/35[®] Range of Lenses

Units	12mm	14mm	16mm	18mm	21mm	25mm	27mm	32mm	35mm	40mm	50mm	65mm	65mm SE	75mm	100mm	135mm	150mm	180mm	300mm	
T Stop Range	T2-22	T2-22	T2-22	T2-22	T2-22	T2-22	T2-22	T2-22	T2-22	T2-22	T2-22	T2-22	T2-22	T2-22	T2-22	T2-22	T2-22	T2-22	T2-22	T2-22
Angular Rotation of Iris Scale degrees	96	96	96	96	96	96	96	96	95	94	93	92	92	92	91	92	92	94	78	78
Minimum Marked Object Distance mm	225	225	225	250	250	250	250	325	350	450	500	700	700	800	950	850	1050	1300	2100	2100
mm inches	9	9	9	9	9	9	10	12	14	16	20	27	27	30	36	33	42	51	84	84
Close Focus from Lens Front mm	47	46	46	60	60	60	85	119	169	207	323	509	489	573	707	564	834	1058	1846	1846
inches	2.0	2.0	2.0	2.5	2.5	2.5	3.5	4.9	6.9	8.4	13	20	19.2	23	28	20.7	32.8	41.7	74	74
Angular Rotation to MOD Endstop degrees	270	300	270	300	270	300	270	300	300	300	300	300	300	300	300	340	320	320	320	320
Max. Diagonal Angle of View for Super 35 Format degrees	103	94	86	80	71	62	58	50	46	41	34	26	26	22	17	13	11.5	9.5	5.7	5.7
Length from Front of Lens to Lens Mount mm	126	127	127	113	113	113	113	129	129	141	125	125	145	125	141	184	157	185	202	202
inches	5.0	5.0	5.0	4.5	4.5	4.5	4.5	5.0	5.0	5.5	4.9	4.9	5.7	4.9	5.5	7.3	6.2	7.3	7.9	7.9
Maximum Front Diameter mm	156	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	125	136	136	136
Total Weight kg	3	2.2	2.45	1.75	2.0	1.6	1.6	1.85	1.9	2.0	1.5	1.6	2.25	1.75	2.0	2.25	3.5	4.3	4.7	4.7
lbs	6.5	4.8	5.4	3.85	4.4	3.5	3.55	4.0	4.2	4.4	3.3	3.55	4.95	3.85	4.4	4.95	7.7	9.45	10.35	10.35

Max Format Cover 30mm diameter (Super 35mm format)

Focus Scales Two opposing focus scales – metric and footage. Scales marked from infinity to MOD.

Focus Drive Gear 140 teeth 0.8 metric module x 6.0mm wide x 98mm from image plane.
140 teeth 0.8 metric module x 6.0mm wide x 99mm from image plane (300mm)

Iris Scales Two opposing linear T-scales – whole and third stops marked

Iris Drive Gear 134 teeth 0.8 metric module x 4.0mm wide x 79.5mm from image plane (300mm)

Internal Front Fitting Filter Internal thread for filter adapter M105 x 0.75 pitch (12mm and 14mm not applicable)
M120 x 1.0 pitch (150mm), M131 x 1.0 pitch (180mm, 300mm)

Additional resources

Downloads <http://www.cookeoptics.com/s/technicaldocumentation.html>



About Cooke



For over 100 years, Cooke has been at the centre of the filmmaking business. We've been listening to the community of which we are a part. We lead by introducing innovative lenses and support products, like /i Technology because we know that our success is built on a simple idea—do what the filmmaker needs.

Our factory in Leicester, England has generations from the same family working side by side. That experience is unbeaten anywhere. We manufacture a full range of primes and zooms for 35mm and digital photography, as well as large format stills lenses.

We know our customers, and they know us, as individuals. Our rental partners do their training next to the craftsman who built their lenses. There are no barriers. We meet our customers at trade shows, on location around the world, and we welcome customers by appointment to our factory in the U.K. for an informal tour and discussion.

Our quality is monitored at every stage of manufacturing. Our Quality Control technicians carry out a 20 point check to ensure that the lenses leaving our factory are made to the highest quality possible. We're intolerant when it comes to tolerances. We research continuously to drive innovation. Our lenses are dependable and practical in use on the set; our optics superb. The lenses are straightforward to maintain—which is why so many rental facilities carry our products. Our manufacturing and testers keep going until we get each lens within our very tight specification. We get it right, whatever it takes.



At the heart of what makes Cooke special is "The Cooke Look." The Cooke Look® is about the science of creating beautiful images for the motion picture industry.

As a result, for over a century, cinematographers have chosen Cooke lenses for a smooth roundness and dimensionality to the picture and for the velvety skin tones that flatter.



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"To Cooke Optics Limited for their continuing innovation in the design, development and manufacture of advanced camera lenses that have helped define the look of motion pictures over the last century."

Academy Award of Merit
presented on February 9, 2013

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