

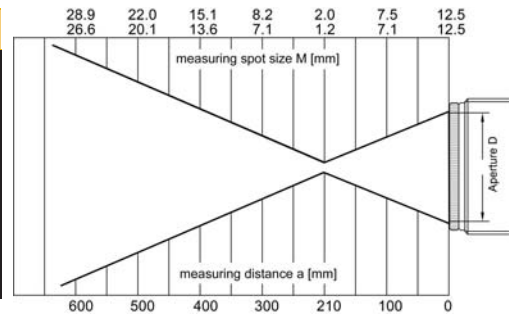


## TECHNICAL SPECIFICATIONS FOR DS-44N / DG-44N

TECHNICAL DATA				
Type	DS-44N		DG-44N	
Temperature range	600 °C to 1800 °C	800 °C to 2500 °C	250 °C to 1300 °C	350 °C to 1800 °C
Sub temperature range	Adjustable within temperature range, minimum span 51 °C			
Spectral range	0.8 µm to 1.1 µm		1.5 µm to 1.8 µm	
Optics (refer tables)	Several fixed optics (type I, II, III and IV)			
Distance ratio	100 : 1	200 : 1	100 : 1	200 : 1
Measurement uncertainty	0.5 % of meas. value ( $T_U = 23\text{ °C}$ , $\varepsilon = 1$ , $t_{95} = 1\text{ s}$ )			
Reproducibility	0.1 % of meas. value ( $T_U = 23\text{ °C}$ , $\varepsilon = 1$ , $t_{95} = 1\text{ s}$ )			
Response time (t95)	5 ms, adjustable up to 10s			
Emissivity	Adjustable, 0.05 to 1.00			
Storage	Maximum value storage, adjustable via interface			
Output	4...20 mA, linear, max. load: 700 Ω at 24 V			
Interface	Galvanically isolated RS485 interface, half duplex, 115 Kbd max.			
Software	PSC Spot for Windows®			
Aiming	Green LED or LASER aiming			
Parameters	Adjustable via software (emissivity, response time, temperature unit °C or °F, storage, sub range) with use of communications cable			
Power supply	24 VDC ± 25 % and 5 V to 30 VDC (LED/laser)			
Power consumption	1.5W Max.			
Operating temperature	0 °C to 70 °C			
Storage temperature	-20 °C to 70 °C			
Weight	approx. 1 lb			
Dimensions	Thread M40 x 1.5, length 5 inches (125mm)			
Housing	Stainless steel with plug connector and protection window			
Safety class	IP 65 (DIN 40 050)			
CE-Symbol	According to EU regulations (EN 50 011)			
Scope of delivery	PSC-DS-44N or DG-44N, manual, inspection sheet, PSC Spot for Windows (without connecting cable, please order separately)			
Accessories, mechanical, electrical and optical				
Connecting cable 12-pin	Length Feet 6.5', 16', 33', 49', 65', 82', 98' (2 m, 5 m, 10 m, 15 m, 20 m, 25 m or 30 m)			
Interface Module	RS485 to USB			
Power supply	24 VDC, 0.6 A			
Mounting angle bracket	Fixed or adjustable			
Ball and socket mounting	Stainless steel, adjustable			
Air purge unit	Stainless steel, air pressure 0.1 to 1.0 bar, oil free			
Water cooling jacket	With integrated air purge and mounting angle			
Vacuum flange	KF 16, with quartz glass			
Protection window	Quartz or sapphire			

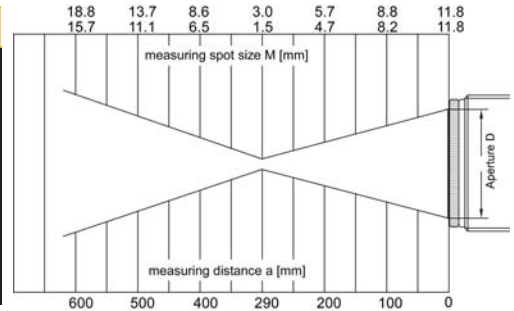
## Optics I (focussed at a = 210mm measuring distance)

Measuring distance a in inches (mm)	0	4 (100)	<b>8.26 (210)</b>	12 (300)	15.7 (400)	19.6 (500)	23.6 (600)
Measuring field diameter M in mm							
DS-40N (600°C to 1800°C)	0.5 (12.5)	0.3 (7.5)	<b>0.8 (2.0)</b>	0.33 (8.2)	0.6 (15.1)	0.88 (22.0)	1.56 (28.9)
DS-40N (800°C to 2500°C)	0.5 (12.5)	0.28 (7.1)	<b>0.48 (1.2)</b>	0.28 (7.1)	0.54 (13.6)	0.8 (20.1)	1.06 (26.6)
DG-40N (250°C to 1300°C)	0.5 (12.5)	0.3 (7.5)	<b>0.8 (2.0)</b>	0.33 (8.2)	0.6 (15.1)	0.88 (22.0)	1.56 (28.9)
DG-40N (350°C to 1800°C)	0.5 (12.5)	0.28 (7.1)	<b>0.48 (1.2)</b>	0.28 (7.1)	0.54 (13.6)	0.8 (20.1)	1.06 (26.6)



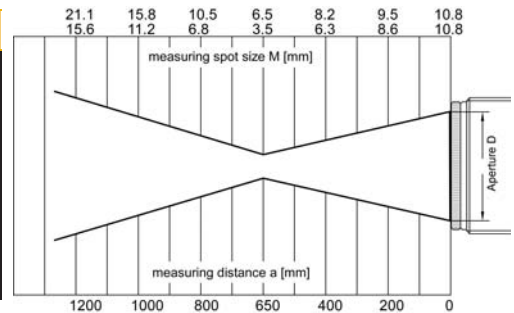
## Optics II (focussed at a = 290mm measuring distance)

Measuring distance a in inches (mm)	0	4 (100)	7.9 (200)	<b>11.6 (290)</b>	15.7 (400)	19.6 (500)	23.6 (600)
Measuring field diameter M in mm							
DS-40N (600°C to 1800°C)	0.47 (11.8)	0.35 (8.8)	0.23 (5.7)	<b>0.12 (3.0)</b>	0.34 (8.6)	0.55 (13.7)	0.75 (18.8)
DS-40N (800°C to 2500°C)	0.47 (11.8)	0.33 (8.2)	0.19 (4.7)	<b>0.60 (1.5)</b>	0.26 (6.5)	0.44 (11.1)	0.63 (15.7)
DG-40N (250°C to 1300°C)	0.47 (11.8)	0.35 (8.8)	0.23 (5.7)	<b>0.12 (3.0)</b>	0.34 (8.6)	0.55 (13.7)	0.75 (18.8)
DG-40N (350°C to 1800°C)	0.47 (11.8)	0.33 (8.2)	0.19 (4.7)	<b>0.60 (1.5)</b>	0.26 (6.5)	0.44 (11.1)	0.63 (15.7)



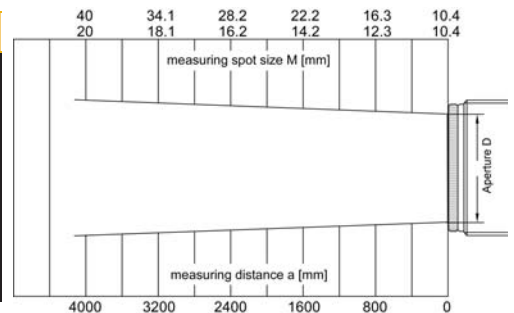
## Optics III (focussed at a = 650mm measuring distance)

Measuring distance a in inches (mm)	0	7.9 (200)	15.7 (400)	<b>25.59 (650)</b>	32 (800)	40 (1000)	48 (1200)
Measuring field diameter M in mm							
DS-40N (600°C to 1800°C)	0.43 (10.8)	0.38 (9.5)	0.33 (8.2)	<b>0.26 (6.5)</b>	0.42 (10.5)	0.63 (15.8)	0.84 (21.1)
DS-40N (800°C to 2500°C)	0.43 (10.8)	0.34 (8.6)	0.25 (6.3)	<b>0.14 (3.5)</b>	0.27 (6.8)	0.45 (11.2)	0.62 (15.6)
DG-40N (250°C to 1300°C)	0.43 (10.8)	0.38 (9.5)	0.33 (8.2)	<b>0.26 (6.5)</b>	0.42 (10.5)	0.63 (15.8)	0.84 (21.1)
DG-40N (350°C to 1800°C)	0.43 (10.8)	0.34 (8.6)	0.25 (6.3)	<b>0.14 (3.5)</b>	0.27 (6.8)	0.45 (11.2)	0.62 (15.6)



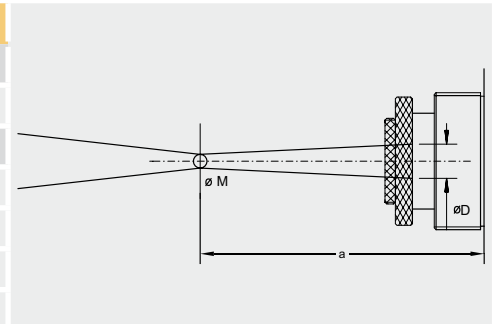
## Optics IV (focussed at a = 4000mm measuring distance)

Measuring distance a in inches (mm)	0	15.7 (400)	32 (800)	64 (1600)	96 (2400)	128 (3200)	<b>160 (4000)</b>
Measuring field diameter M in mm							
DS-40N (600°C to 1800°C)	0.41 (10.4)	0.54 (13.4)	0.65 (16.3)	0.89 (22.2)	1.13 (28.2)	1.36 (34.1)	<b>1.6 (40)</b>
DS-40N (800°C to 2500°C)	0.41 (10.4)	0.56 (1.4)	0.49 (12.3)	0.57 (14.2)	0.65 (16.2)	0.72 (18.1)	<b>0.8 (20)</b>
DG-40N (250°C to 1300°C)	0.41 (10.4)	0.54 (13.4)	0.65 (16.3)	0.89 (22.2)	1.13 (28.2)	1.36 (34.1)	<b>1.6 (40)</b>
DG-40N (350°C to 1800°C)	0.41 (10.4)	0.56 (1.4)	0.49 (12.3)	0.57 (14.2)	0.65 (16.2)	0.72 (18.1)	<b>0.8 (20)</b>



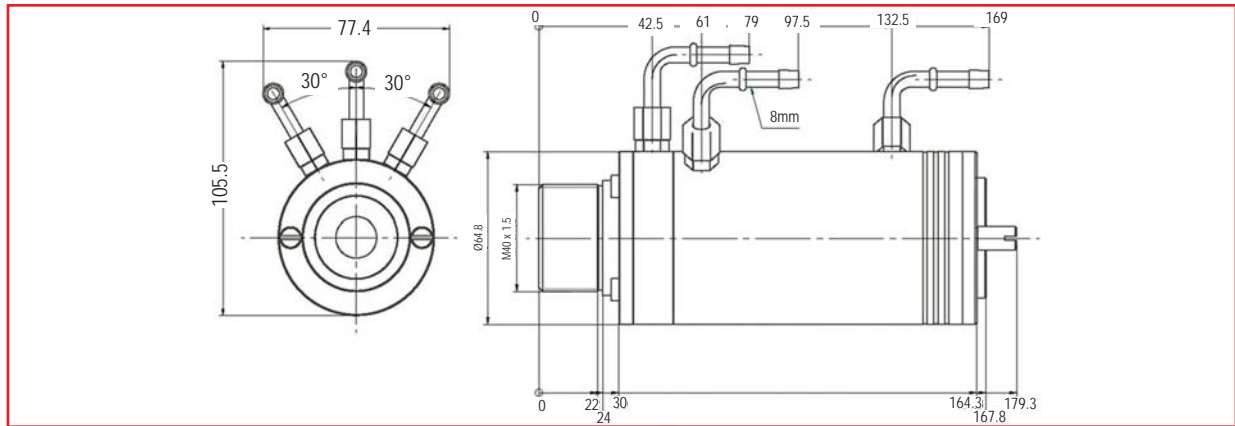
## Variable Focus Optics

Measuring distance a in mm	0	300	400	500	600	700	800
Optics pullout in mm	0	6.1	5.0	3.9	2.6	1.3	0
Measuring field diameter M in mm							
DS 44N (600 °C to 1800 °C)	10	3.0	4.0	5.2	6.5	7.5	8.6
DS 44N (800 °C to 2500 °C)	10	1.5	2.1	2.6	3.5	4.5	5.5
DG 44N (250 °C to 1300 °C)	10	3.0	4.0	5.2	6.5	7.5	8.6
DG 44N (350 °C to 1800 °C)	10	1.5	2.1	2.6	3.5	4.5	5.5

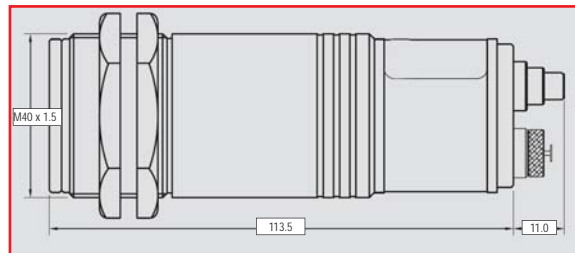


## Dimensions in MM

### Cooling Jacket & Air Purge



### Pyrometer



## Accessories

Adjustable mounting bracket  
PN#3310A21011



Digital Display  
PN#TIC500



Cooling jacket with air purge  
PN#3310A23010



Power supply 24 VDC (din rail)  
PN#950-004



Air purge unit  
PN#3310A22010



Window Slide

