

# Calibration Distances & Temperatures

Pyrometers	Radiation Sources		Source Ø: 30 mm	Source Ø: 38 mm	Source Ø: 65 mm	Calibration temperatures [°C]			
	Model	Optics	Calibration Distances			Point 1	Point 2	Point 3	
CS	LT15	SF			150 mm	Tamb	108.3	500	
CSmicro	LT02	SF			90 mm	Tamb	108.3	500	
	LT15 / LT15H / LT22H	SF / CF			150 mm	Tamb	108.3	500	
	LT15HS	SF / CF			150 mm	Tamb	70	108.3	
	2ML	SF	60 mm			90 mm	265	340	500
		CF / CF1				90 mm	265	340	500
	2MH	SF	60 mm	110 mm		90 mm	395	800	1400
		CF / CF1				90 mm	395	800	1400
	3ML	SF / CF / CF1			90 mm	55	108.3	340	
	3MH	SF / CF / CF1			90 mm	108.3	200	500	
	CT	LT02	SF			90 mm	Tamb	110.3	510
LT15 / LT22		SF / CF			150 mm	Tamb	110.3	510	
LT15F / LT25F		SF / CF			150 mm	Tamb	110.3	510	
LT02H / LT10H		SF / CF			90 mm	Tamb	110.3	510	
1ML		SF	60 mm			90 mm	500	800	1000
		CF / CF1				90 mm	500	800	1000
1MH		SF	60 mm	110 mm		90 mm	660	1000	1400
		CF / CF1				90 mm	660	1000	1400
1MH1		SF	60 mm	110 mm		90 mm	820	1000	1400
		CF / CF1				90 mm	820	1000	1400
2ML		SF	60 mm			90 mm	275	500	780
		CF / CF1				90 mm	275	500	780
2MH		SF	60 mm	110 mm		90 mm	395	500	1000
		CF / CF1				90 mm	395	500	1000
2MH1		SF	60 mm	110 mm		90 mm	500	1000	1400
		CF / CF1				90 mm	500	1000	1400
3ML		SF / CF / CF1			90 mm	70	200	340	
3MH		SF / CF / CF1			90 mm	108.3	340	500	
3MH1		SF	60 mm			90 mm	175	500	980
		CF / CF1				90 mm	175	500	980
3MH2		SF	60 mm	110 mm		90 mm	225	500	1000
		CF / CF1				90 mm	225	500	1000
3MH3		SF	60 mm	110 mm		90 mm	275	500	1400
		CF / CF1				90 mm	275	500	1400
4ML		SF / CF			150 mm	Tamb	200	500	
G5L		SF		110 mm		90 mm	108.3	500	1000
G5H		SF		110 mm		90 mm	275	500	1000
P3		SF				150 mm	108.3	225	340
P7		SF				150 mm	Tamb	110.3	510

Tamb = Ambient temperature

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Pyrometers	Radiation Sources		Source Ø: 30 mm	Source Ø: 38 mm	Source Ø: 65 mm	Calibration temperatures [°C]		
	Model	Optics	Calibration Distances			Point 1	Point 2	Point 3
CTi	LT02	SF			90 mm	Tamb	108.3	500
	LT15 / LT22	SF / CF			150 mm	Tamb	108.3	500
	LT02H / LT10H	SF			90 mm	Tamb	108.3	500
	LT10H	CF1			90 mm	Tamb	108.3	500
	LT02F	SF			90 mm	Tamb	108.3	500
	LT15F / LT25F	SF			150 mm	Tamb	108.3	500
	G5L	SF		150 mm		55	350	800
	G5H	SF		150 mm		108.3	500	1400
	P3	SF			150 mm <sup>1)</sup>	35	108.3	500
	P7	SF			150 mm	Tamb	108.3	500
	1MXL	SF / CF		90 mm		350	500	800
	1ML	SF / CF		150 mm		500	650	1000
	1MH	SF / CF		150 mm		650	1400	
	1MH1	SF / CF		150 mm		800	1400	
	2MXL	SF / CF			90 mm	166	266	500
	2ML	SF / CF			150 mm	266	340	500
	2MH	SF / CF		150 mm		395	650	1400
	2MH1	SF / CF		150 mm		500	800	1400
	3MXL	SF / CF / CF1			90 mm <sup>1)</sup>	35	108.3	340
	3ML	SF / CF / CF1			90 mm	55	108.3	340
	3MH	SF / CF / CF1			90 mm	108.3	275	500
	3MH1	SF / CF		150 mm		166	350	800
	3MH2	SF / CF		150 mm		200	500	1400
	3MH3	SF / CF		150 mm		266	800	1400
	4ML	SF / CF			150 mm	Tamb	108.3	340

<sup>1)</sup> at Ø 50 mm instead of Ø 65 mm

# Calibration Distances & Temperatures

Pyrometers	Radiation Sources		Source Ø: 30 mm	Source Ø: 38 mm	Source Ø: 65 mm	Calibration temperatures [°C]		
	Models	Optics	Calibration Distances			Point 1	Point 2	Point 3
CSlaser	LT	SF / CF4	350 mm			Tamb	166	500
		CF1	110 mm			Tamb	166	500
		CF2	150 mm			Tamb	166	500
		CF3	200 mm			Tamb	166	500
	LTHS	SF / CF4	350 mm			Tamb	70	110
		CF1	110 mm			Tamb	70	110
		CF2	150 mm			Tamb	70	110
		CF3	200 mm			Tamb	70	110
	2ML	SF / CF4	350 mm			275	500	780
		CF2	150 mm			275	500	780
		CF3	200 mm			275	500	780
		FF	500 mm			275	500	780
	2MH	SF / CF4	350 mm			395	820	1400
		CF2	150 mm			395	820	1400
		CF3	200 mm			395	820	1400
		FF	500 mm			395	820	1400
CTlaser	LT / LTF	SF / CF4	350 mm			Tamb	166	500
		CF1	110 mm			Tamb	166	500
		CF2	150 mm			Tamb	166	500
		CF3	200 mm			Tamb	166	500
	05M	SF	350 mm			1000	1200	1400
		FF	500 mm			1000	1200	1400
	1ML	SF / CF4	350 mm			500	780	1000
		CF2	150 mm			500	780	1000
		CF3	200 mm			500	780	1000
		FF	500 mm			500	780	1000
	1MH	SF / CF4	350 mm			660	1000	1400
		CF2	150 mm			660	1000	1400
		CF3	200 mm			660	1000	1400
		FF	500 mm			660	1000	1400
	1MH1	SF / CF4	350 mm			820	1000	1400
		CF2	150 mm			820	1000	1400
CF3		200 mm			820	1000	1400	
FF		500 mm			820	1000	1400	

# Calibration Distances & Temperatures



Pyrometers	Radiation Sources		Source Ø: 30 mm	Source Ø: 38 mm	Source Ø: 65 mm	Calibration temperatures [°C]		
	Models	Optics	Calibration Distances			Point 1	Point 2	Point 3
CTlaser	2ML	SF / CF4	350 mm			275	500	780
		CF2	150 mm			275	500	780
		CF3	200 mm			275	500	780
		FF	500 mm			275	500	780
	2MH	SF / CF4	350 mm			395	820	1400
		CF2	150 mm			395	820	1400
		CF3	200 mm			395	820	1400
		FF	500 mm			395	820	1400
	2MH1	Sf / CF4	350 mm			500	820	1400
		CF2	150 mm			500	820	1400
		CF3	200 mm			500	820	1400
		FF	500 mm			500	820	1400
	3ML	SF / CF4	350 mm			110	166	340
		CF1	110 mm			110	166	340
		CF2	150 mm			110	166	340
		CF3	200 mm			110	166	340
		FF	500 mm			110	166	340
	3MH	SF / CF4	350 mm			110	225	500
		CF1	110 mm			110	225	500
		CF2	150 mm			110	225	500
		CF3	200 mm			110	225	500
		FF	500 mm			110	225	500
	3MH1	SF / CF4	350 mm			166	500	970
		CF1	110 mm			166	500	970
		CF2	150 mm			166	500	970
		CF3	200 mm			166	500	970
		FF	500 mm			166	500	970
	3MH2	SF / CF4	350 mm			225	500	1400
		CF1	110 mm			225	500	1400
		CF2	150 mm			225	500	1400
		CF3	200 mm			225	500	1400
		FF	500 mm			225	500	1400
	3MH3	SF / CF4	350 mm			275	500	1400
		CF1	110 mm			275	500	1400
		CF2	150 mm			275	500	1400
		CF3	200 mm			275	500	1400
FF		500 mm			275	500	1400	

# Calibration Distances & Temperatures

Pyrometers	Radiation Sources		Source Ø: 30 mm	Source Ø: 38 mm	Source Ø: 65 mm	Calibration temperatures [°C]		
	Models	Optics	Calibration Distances			Point 1	Point 2	Point 3
CTlaser	4ML	SF / CF4		350 mm		25	166	350
		CF1	100 mm <sup>1)</sup>			25	166	350
		CF2 / CF3	200 mm			25	166	350
		FF				500 mm <sup>2)</sup>	25	166
	MT / F6 / G5HF	SF / CF4	350 mm			225	500	1000
		CF1	110 mm			225	500	1000
		CF2	150 mm			225	500	1000
		CF3	200 mm			225	500	1000
	MTH / F2H / F6H / G5H1F	SF / CF4	350 mm			425	1000	1400
		CF1	110 mm			425	1000	1400
		CF2	150 mm			425	1000	1400
		CF3	200 mm			425	1000	1400
	F2	SF / CF4	350 mm			500	1000	1400
		CF1	110 mm			500	1000	1400
		CF2	150 mm			500	1000	1400
		CF3	200 mm			500	1000	1400
	G5L / G7	SF / CF4	350 mm			110	500	1000
		CF1	110 mm			110	500	1000
		CF2	150 mm			110	500	1000
		CF3	200 mm			110	500	1000
	G5H	SF / CF4	350 mm			275	500	1000
		CF1	110 mm			275	500	1000
		CF2	150 mm			275	500	1000
		CF3	200 mm			275	500	1000
	P7	SF / CF4	350 mm			55	166	500
		CF1	110 mm			55	166	500
		CF2	150 mm			55	166	500
CF3		200 mm			55	166	500	

<sup>1)</sup> at Ø 20 mm instead of Ø 30 mm

<sup>2)</sup> at Ø 50 mm instead of Ø 65 mm

# Calibration Distances & Temperatures

Pyrometers	Radiation Sources		Source Ø: 30 mm	Source Ø: 38 mm	Source Ø: 65 mm	Calibration temperatures [°C]				
	Models	Optics	Calibration Distances			Point 1	Point 2	Point 3	Point 4	
CSvideo / CTvideo	2ML	SFV	350 mm			275	500	780		
		CFV	200 mm			275	500	780		
	2MH	SFV	350 mm			395	820	1400		
		CFV	200 mm			395	820	1400		
	3ML	SFV	350 mm			110	166	340		
		CFV	200 mm			110	166	340		
	3MH	SFV	350 mm			110	225	500		
		CFV	200 mm			110	225	500		
	CTvideo	1ML	SFV	350 mm			500	780	1000	
			CFV	200 mm			500	780	1000	
1MH		SFV	350 mm			660	1000	1400		
		CFV	200 mm			660	1000	1400		
1MH1		SFV	350 mm			820	1000	1400		
		CFV	200 mm			820	1000	1400		
2MH1		SFV	350 mm			500	820	1400		
		CFV	200 mm			500	820	1400		
3MH1		SFV	350 mm			166	500	970		
		CFV	200 mm			166	500	970		
3MH2		SFV	350 mm			225	500	1400		
		CFV	200 mm			225	500	1400		
3MH3		SFV	350 mm			275	500	1400		
		CFV	200 mm			275	500	1400		
CSvision		R1ML	SFV		650 mm	650	800	1000	1800	
			CFV		350 mm	650	800	1000	1800	
	R1MH / R1MH1	SFV		650 mm	1050	1200	1400	2600		
		CFV		350 mm	1050	1200	1400	2600		
	2ML	SFV		600 mm	350	500	800	1400		
		CFV		350 mm	350	500	800	1400		
CTratio	1ML	SFV / CFV		350 mm	500 <sup>1)</sup>	650	900	1400		
	1MH	SFV		650 mm	675 <sup>1)</sup>	875	1100	1800		
		CFV		350 mm	675 <sup>1)</sup>	875	1100	1800		
	1MH1	SFV		650 mm	1020	1300	1500	2600		
		CFV		350 mm	1020	1300	1500	2600		
	2ML	SFV / CFV		350 mm	266 <sup>1)</sup>	350	600	1000		
	2MH	SFV		500 mm	400 <sup>1)</sup>	500	800	1400		
		CFV		350 mm	400 <sup>1)</sup>	500	800	1400		
	2MH1	SFV		650 mm	600	900	1300	2600		
		CFV		350 mm	600	900	1300	2600		

<sup>1)</sup> Point 1 only for single color temperatures (T1C)

# Calibration Distances & Temperatures

Imagers	Radiation Sources		Source Ø: 20 mm	Source Ø: 38 mm	Source Ø: 50 mm	Calibration Temperatures [°C]			
	Optics (Name / HFOV)	Measurement Range [°C]	Calibration Distances			Point 1	Point 2	Point 3	Point 4
Xi 80	F13 (12°)				640 mm				
	F05 (30°)				350 mm				
	F03 (55°)				150 mm				
	F02 (80°)				70 mm				
Xi 400 / Xi 410	F20 (18°)				640 mm				
	F13 (29°)				350 mm				
	F08 (53°)				150 mm				
	F06 (80°)				150 mm				
	F20CF (18°)		90 mm						
Xi 640	O22 (22°)				700 mm				
	O36 (36°)				500 mm				
	O65 (65°)				300 mm				
Xi 80 / 400 / 410 / 640	All optics	-20 – 100				20	50	100	
		0 – 250				20	50	100	250
		150 – 900				250	500		
		200 – 1500				250	500	1200	
Xi 1M	O7SF (7°)	525 (575) – 1800 <sup>1)</sup>		1000 mm		700	1200		
	O7CF (7°)	525 (575) – 1800 <sup>1)</sup>		600 mm		700	1200		
	O14 (14°)	450 (550) – 1800 <sup>1)</sup>		600 mm		700	1200		
	O28 (28°)	450 (550) – 1800 <sup>1)</sup>		400 mm		700	1200		
Xi 05M	O14 (14°)	950 (1050) – 2450 <sup>1)</sup>		600 mm		1200	1400		
	O28 (28°)	950 (1050) – 2450 <sup>1)</sup>		400 mm		1200	1400		

<sup>1)</sup> Values in brackets represent the bottom temperatures for the 500 Hz mode

# Calibration Distances & Temperatures

Imagers	Radiation Sources		Source Ø: 20 mm	Source Ø: 38 mm	Source Ø: 50 mm	Calibration Temperatures [°C]			
	Optics (Name / HFOV)	Measurement Range [°C]	Calibration Distances			Point 1	Point 2	Point 3	Point 4
PI 400i / 450i / 450i G7	O18 (18°)				700 mm				
	O29 (29°)				500 mm				
	O53 (53°)				300 mm				
	O80 (80°)				150 mm				
PI 640i / 640i G7	O15 (15°)				1000 mm				
	O33 (33°)				350 mm				
	O60 (60°)				150 mm				
	O90 (90°)				100 mm				
	O120 (120°)				100 mm				
PI 640i	MO44 (12°)		90 mm <sup>1)</sup>						
	MO2X (10°)				15 mm <sup>4)</sup>				
PI 400i / 450i / 640i	All optics	-20 – 100				Tamb	50	100	
		0 – 250				Tamb	50	100	200
		150 – 900				200	500		
		200 – 1500				200	500	1200	
PI 450i G7 / PI 640i G7	All optics	150 – 900				200	500		
		200 – 1500				500	1200		
PI 1M	O9 (9° / 4°) <sup>3)</sup>	525 (575 / 675) – 1800 <sup>2)</sup>		2000 mm		700	1200		
	O13 (13° / 7°) <sup>3)</sup>	525 (575 / 675) – 1800 <sup>2)</sup>		1500 mm		700	1200		
	O27 (27° / 14°) <sup>3)</sup>	450 (500 / 600) – 1800 <sup>2)</sup>		600 mm		700	1200		
	O41 (41° / 20°) <sup>3)</sup>	450 (500 / 600) – 1800 <sup>2)</sup>		400 mm		700	1200		
PI 08M	O27 (27° / 14°) <sup>3)</sup>	575 (625 / 750) – 1900 <sup>2)</sup>		600 mm		900	1200		
	O41 (41° / 20°) <sup>3)</sup>	575 (625 / 750) – 1900 <sup>2)</sup>		400 mm		900	1200		
PI 05M	O13 (13° / 7°) <sup>3)</sup>	950 (1000 / 1150) – 2450 <sup>2)</sup>		1500 mm		1200	1400		
	O27 (27° / 14°) <sup>3)</sup>	900 (950 / 100) – 2450 <sup>2)</sup>		600 mm		1200	1400		
	O41 (41° / 20°) <sup>3)</sup>	900 (950 / 1100) – 2450 <sup>2)</sup>		400 mm		1200	1400		

<sup>1)</sup> at Ø 10 mm instead of Ø 20 mm

<sup>2)</sup> Values in brackets represent the bottom temperatures for: 32 Hz and 80 Hz mode/ 1 kHz mode

<sup>3)</sup> HFOV values for 764 x 480 px / 382 x 288 px resolution

<sup>4)</sup> at Ø 65 mm instead of Ø 50 mm