

# Automated Optical Inspection Specifications



OptiCon SmartLine



OptiCon BasicLine



OptiCon AdvancedLine

		OptiCon SmartLine X25	OptiCon BasicLine X30 / X45 / X60	OptiCon AdvancedLine X30 / X45 / X60			
General specifications	Camera configuration	Main camera	X25	X30 / X45 / X60	X30 / X45 / X60		
		Add-on camera	-	Extended THT inspection	Angled view with rotation drive Chameleon	Extended THT inspection	Angled view with rotation drive Chameleon
		Laser height measurement	-	Standard	Precision	Standard	Precision
	Power requirements	230 V AC / 2 kVA	230 V AC / 2 kVA	230 V AC / 2 kVA	230 V AC / 2 kVA compressed air 6 bar, consumption < 20 l/h		
	PCB transportation direction	-	-	-	left-right / right-left / left-left / right-right		
	In-line interface	-	-	-	SMEMA, Siemens, Sensor		
	PCB clearance (bottom side)	50 mm	50 mm	50 mm	50 mm		
	Dimensions (w x d x h)	1000 mm x 800 mm x 600 mm	1130 mm x 1400 mm x 1250 mm	1000 mm x 1600 mm x 1500 mm	1000 mm x 1600 mm x 1500 mm		
Weight	200 kg	365 kg	584 kg	584 kg			
Inspection parameters	Inspection area	Main camera	400 mm x 390 mm <sup>1)</sup>	510 mm x 350 mm <sup>1)</sup>	450 mm x 460 mm <sup>1)</sup>		
		Add-on camera	-	450 mm x 350 mm <sup>1)</sup>	450 mm x 370 mm <sup>1)</sup>		
		Laser height measurement	-	340 mm x 350 mm <sup>1)</sup>	340 mm x 460 mm <sup>1)</sup>		
	Inspection speed	25 cm <sup>2</sup> /s <sup>2)</sup>	30 / 45 / 60 cm <sup>2</sup> /s <sup>2)</sup>	30 / 45 / 60 cm <sup>2</sup> /s <sup>2)</sup>	30 / 45 / 60 cm <sup>2</sup> /s <sup>2)</sup>		
	PCB size (max.)	420 mm x 390 mm <sup>1)</sup>	510 mm x 360 mm <sup>1)</sup>	Min. 80 mm x 80 mm / Max. 600 mm x 450 mm <sup>1)</sup>	Min. 80 mm x 80 mm / Max. 600 mm x 450 mm <sup>1)</sup>		
	Max. PCB thickness	5 mm	5 mm	5 mm	5 mm		
	Max. PCB weight	5 kg	5 kg	5 kg	5 kg		
	Smallest inspectable chip component	01005	01005	01005	01005		
	Solder joint inspection on IC pins up to	Pitch 0.3	Pitch 0.3	Pitch 0.3	Pitch 0.3		

<sup>1)</sup> modified dimensions on request / <sup>2)</sup> depending on board assembly and inspection task

		Main camera				Add-on camera		Laser height measurement system	
Specifications camera module	Camera	X25	X30	X45	X60	Extended THT inspection	Angled view with rotation drive Chameleon	Standard	Precision
	Resolution	10.5 µm / 21 µm				35 µm	10.5 µm / 21 µm	3 µm	1 µm
	Field of view	27 mm x 21 mm		42 mm x 42 mm		45 mm x 36 mm	42 mm x 42 mm	Spot size Ø 70 µm	Spot size Ø 30 µm
	Lens	Telecentric				Entocentric		Measurement accuracy ± 15 µm	Measurement accuracy ± 5 µm
	Inspection height	0 mm – 10 mm <sup>3)</sup> 0 mm – 20 mm <sup>4)</sup>				10 mm – 40 mm <sup>3)</sup> 10 mm – 50 mm <sup>4)</sup>	0 mm – 5 mm	30 mm	10 mm
	PCB clearance	50 mm				50 mm	39 mm	50 mm	30 mm

<sup>3)</sup> for solder joint inspection and optical character recognition (OCR) / <sup>4)</sup> for presence and polarity check

TD/E/102010

