

Mobileye® Shield+™ | Technical Specification Sheet

Mobileye® Shield™ v2.0 Main Unit	
Physical Characteristics	
Length:	122mm
Width (without lens):	79mm
Height:	43mm
Weight:	200g
Color:	Black
Case material:	Aluminum/plastic
Cable length:	3m / 8m
Cable diameter:	4.8mm
Electrical Characteristics	
Input voltage:	10-36VDC
Input current min:	12v > 500mA, 24v > 250mA
Input current max:	12v > 700mA, 24v > 300mA
Max power:	8.5W
Environmental Characteristics	
Operating temperature:	-40°C to +80°C
Storage temperature:	-40°C to +100°C
Operation Humidity	95%
Vision Sensor	
Vision Sensor:	Aptina MT9V024 (1/3") RCC
Array Format:	Total: 752H x 480V - Active pixels: 640H x 480V
Optical Format:	1/3"
Pixel Size:	6.0µm x 6.0µm
Dynamic Range:	>55dB linear; >100dB in HDR mode
Shutter type:	Global shutter—TrueSNAP™
Responsivity:	4.8 V/lux sec (550nm)
Angle of view:	38° (horizontal)
Focus range:	5m to infinity
AGC:	Automatic Gain Control of the image sensor for high dynamic range
Audio Synthesizer	
SPL minimum	86dB @ 10cm
EyeQ2® Vision Processor Main Features	
332 MHz clock rate running seven parallel processes	
Two MIPS24KF 32bit CPUs	
Eight 64bit Vision Computing Engines (VCE)	
Eight channels DMA	
64bit width 512KB on-chip SRAM	
Gyro	
3 Axis	X, Y, Z
Operating temperature:	-40°C to +85°C
Sensitivity Changes Vs. Temp	+/- 2 %
Digital Zero-rate level	+/-10 dps
Measurement range	+/- 250 dps

EyeWatch™ Display Unit	
Physical Characteristics	
Diameter:	49mm
Depth:	24mm
Depth (leg closed):	29mm
Depth (leg open):	66mm
Weight:	46g
Color:	Black
Case material:	Plastic
Cable length:	3m
Cable diameter:	3.1mm
Electrical Characteristics	
Input voltage:	5VDC
Input current:	50mA
Environmental Characteristics	
Operating temperature:	-20°C to +80°C
Storage temperature:	-40°C to +100°C
Operating humidity:	Up to 95%
Display Characteristics	
Viewing angle:	100°
Display colors (backlighting):	LCD full color - 40 mcd (min)
Resolution:	128x128 pixels

Full system Electrical Characteristics	
Input voltage	10-36VDC
Input current (full operation)	12v > 750mA, 24v > 320mA
Input current (stand-by max)	12v > 0.4mA, 24v > 0.6mA
Max power consumption	9W

System idle current consumption	
Battery = 24V, IGN status = off	
Shield+ V2.0 configuration	
Only JB	20µA
JB + Master camera	40µA
JB + Master + Rear	95µA
JB + Master + 2x Rear	135µA
JB + Master + 2x Rear + Corner	178µA

Mobileye® Shield™ v2.0 Side SeeQ Unit (Bridge)	
Physical Characteristics	
Length:	100mm
Width (without lens):	82mm
Height:	55mm
Weight:	135g (without cable)
Color:	Black
Case material:	Plastic
Cable length:	7m 0.25m (short cable) * 6.75m (main cable) *
Cable diameter:	2.5mm
Electrical Characteristics	
Input voltage:	10-36VDC
Input current min:	12v > 500mA, 24v > 250mA
Input current max:	12v > 700mA, 24v > 300mA
Max power:	8.5W
Environmental Characteristics	
Operating temperature:	-40°C to +80°C
Storage temperature:	-40°C to +100°C
Operation Humidity	95%

Mobileye® Shield™ v2.0 side SerDec camera	
Vision Sensor	
Vision Sensor:	Aptina MT9V024 (1/3") RCC
Array Format:	Total: 752H x 480V - Active pixels: 640H x 480V
Optical Format:	1/3"
Pixel Size:	6.0µm x 6.0µm
Dynamic Range:	>55dB linear; >100dB in HDR mode
Shutter type:	Global shutter—TrueSNAP™
Responsivity:	4.8 V/lux sec (550nm)
Angle of view:	38° (horizontal)
Focus range:	5m to infinity
AGC:	Automatic Gain Control of the image sensor for high dynamic range
Environmental Characteristics	
Operating temperature:	-40°C to +80°C
Storage temperature:	-40°C to +100°C
Operation Humidity	95%
Water resistance:	Outdoor ambient, standard IP-67, IP-69

* Depending on type of the coax cable which has a quick connect/disconnect connector

Mobileye® Shield™ Rear Camera's Display Unit	
Physical Characteristics	
Diameter:	145mm
Depth:	26mm
Depth (leg closed):	35mm
Depth (leg open):	72mm
Weight:	205g
Color:	Black
Case material:	Plastic
Cable length:	3m
Cable diameter:	4mm
Electrical Characteristics	
Input Voltage:	12VDC
Input Current:	16mA on idle, 500mA on alarm
Input Voltage:	24VDC
Input Current:	8mA on idle, 250mA on alarm
Environmental Characteristics	
Operating temperature:	-20°C to +80°C
Storage temperature:	-40°C to +100°C
Operating humidity:	Up to 95%
Display Characteristics	
Resolution:	LEDs

Mobileye® Shield™ Junction Box unit	
Physical Characteristics	
Diameter:	180mm
Depth:	70mm
Depth (leg closed):	20mm
Weight:	155g
Color:	Black
Case material:	Plastic
Electrical Characteristics	
Input Voltage:	12-28VDC
Input Current:	12v → 29mA, 24v → 20mA
Environmental Characteristics	
Operating temperature:	-20°C to +80°C
Storage temperature:	-40°C to +100°C

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