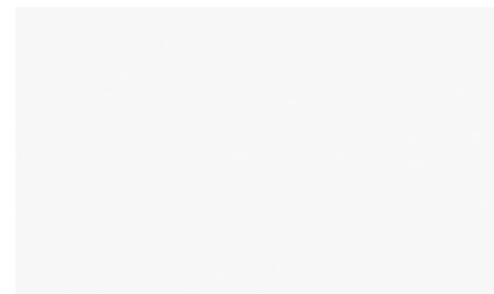


Ordering Guide

Installation Style	TopSUN	TopLED	Toplite-FII	Toplite-F	Toplite-G	Toplite-P
Double Light Heads	7070	8080	F7272	F7070	G7070	P7070
	7060	8060	F7262	F7060	G7060	P7060
	6060	6060	F6262	F6060	G6060	P6060
Triple Light Heads	707060	808060	F727262	F707060	G707060	P707060
	706060	806060	F726262	F706060	G706060	P706060
	606060	606060	F626262	F606060	G606060	P606060
Single Light head	7000	8000	F7200	F7000	G7000	P7000
	6000	6000	F6200	F6000	G6000	P6000
Mobile Single	7000L	/	F7200L	F7000L	G7000L	P7000L
	6000L	6000L	F6200L	F6000L	G6000L	P6000L
Mobile Single Battery	7000LE	/	F7200LE	F7000LE	G7000LE	P7000LE
	6000LE	6000LE	F6200LE	F6000LE	G6000LE	P6000LE

Distributor:



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LED & Halogen Series Shadowless Surgical Light



TopSUN

Adjustable Color Temperature LED surgical light



BELLE Color

Revolutionary LED Lighting Technology: Brilliant Four-Color-Mix concept

Light sources with four colors (green, amber, red and warm/cold white) are mixed when and where they are created (in unique light beam condenser)-but not when the light beam arrive the surgical field and that would not bring super high CRI(Ra>=95) Meanwhile, the new light source requires less LEDs to reach a ideal illuminance with lower irradiated heat.

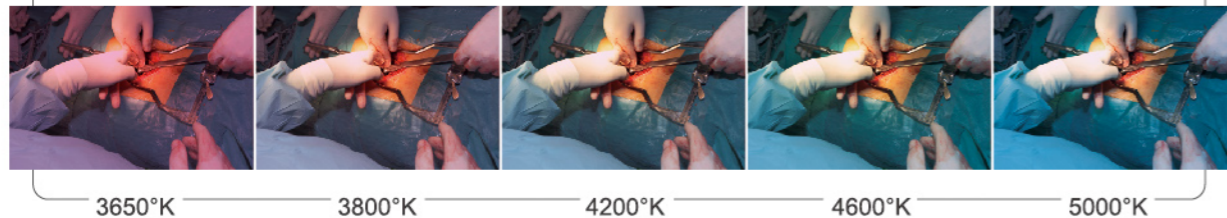


BELLE Vision

10-level Color Temperature Adjustment (CTA)

With the latest four-color-mix concept we can provide a wide color temperature adjustment (3650K-5000k) supports you to distinguish different tissue types more easily, and help you decrease fatigue and pay more concentration during long-lasting procedures.

Color Temperature Adjustment



BELLE Lighting

Ambient light mode for MIS and Endoscopic Surgery

During the MIS (Minimally invasive surgery) and Endoscopic Surgery, TopSUN offers gentle and comfortable ambient light for better screen image observation and less visual fatigue.

BELLE Homogeneity

Automatic Illumination Control System (AICS)

Once the sensor finds area masked by surgeon's head, the lighting of the remaining zones are automatically boosted to maintain the central illumination, which dodges the inconvenience of making adjustments during the procedure.

Meanwhile, AICS ensure true shadowless effect and less heat around surgeon's head.



BELLE Control

2 Intuitive Control Method for Free Choice

You can control the light intensity, color temperature, and spot field diameter of two/three lighthead synchronously via the touch panel.



Keypad panel

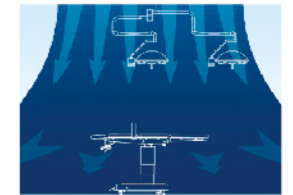
IR control

Sync Mode

Before TOPSUN, the shadowless lamp lights in the Operating Room are isolate. Now we give them a link. With the sync button, User can control each light lamp's intensity, color temperature and light field with any control panel.

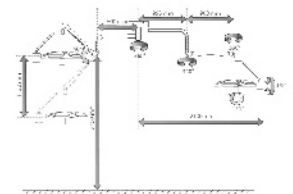
Unique Shape Design For OR Hygiene

First, the smooth housing without external screw fastening makes TopSUN easy to clean and resistant to disinfectants. Second the smooth and small shape design ideally matches with laminar flow.



Excellent Light Lamp Coverage

We offer the most advanced balance arm and rotation arm for TopSUN, Then TopSUN can supply a sufficient illumination range.



Technical Data

Model	TopSUN 7000	TopSUN 6000
Central Illuminance (KLux)	140-160	120-140
Color Temperature (K)	3650-5000 10-level adjustment	3650-5000 10-level adjustment
Spot Field (d10) (mm)	160-320	160-320
d10/d50	≥50%	≥50%
CRI (Ra)	≥95	≥95
Shadow Dilution with Tube	95%	95%
Shadow Dilution with 1 Mask	75%	73%
Shadow Dilution with 2 Masks	60%	60%
Shadow Dilution with Tube & 1 Mask	70%	68%
Shadow Dilution with Tube & 2 Masks	55%	55%
Illumination Depth (L1+L2) (mm)	1050	1000
Ee	500W/M ²	500W/M ²
Radiant Energy (W/m ² ×Lux)	4	4
Bulb lifetime (hrs)	50,000	50,000



TopLED

Fixed Color Temperature LED surgical light

SMART Design

Unique Shamrock Shape Design

TopLED's shamrock design complies with OR laminar flow requirements, at the same time, features excellent heat dissipation, which gives better hygiene for optimum operation conditions.



SMART Control

Innovative and Patent Inductive Light Intensity Control

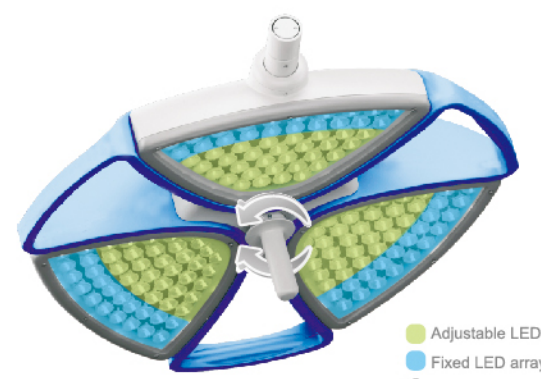
Thank for the innovative inductive control, the surgeon can adjust the light intensity by putting hand in the inductive zone, which keep surgeon's hand sterile throughout the whole surgery, to prevent potential contamination.



SMART Focus

Modular LEDs Array for Easy Lighting Spot Field Adjustment

Just rotating the sterile handle, the peripheral regulable LEDs arrays can positioned and project an ideal focused lighting spot, which suits surgeries of sorts of wound sizes.



- Adjustable LED arrays
- Fixed LED arrays
- Rotatable handle

SMART Mount

Flexible Installation Methods for Your Choice

Ceiling Mount



Mobile Mount



SMART Options

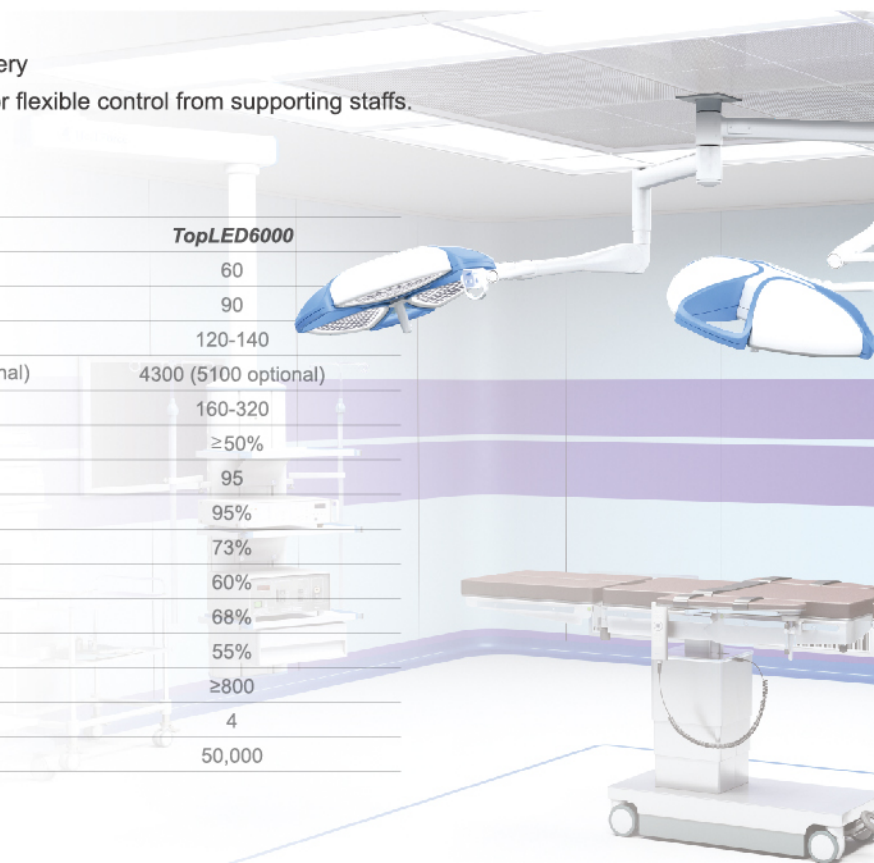
More Optional Functions are Available

Optional Ambient Mode for MIS or Endoscopic surgery

Optional IR control by handle or wall-mount panel for flexible control from supporting staffs.

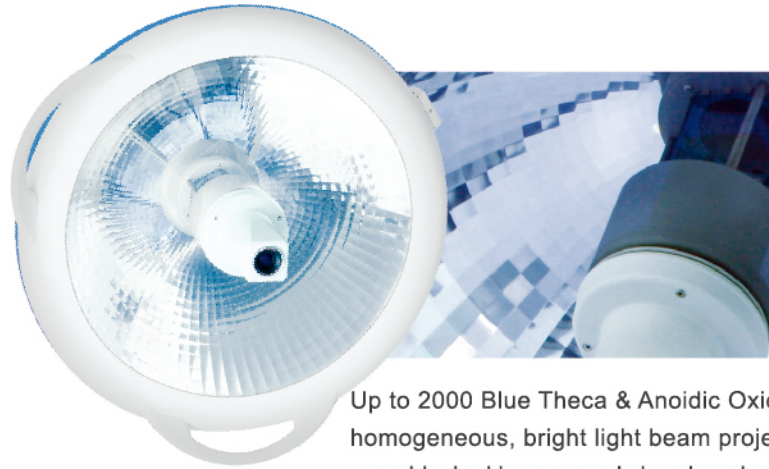
Technical Data

Model	TopLED8000	TopLED6000
Lighthouse Dia.(cm)	80	60
LED Amount	150	90
Central Illuminance (KLux)	140-160	120-140
Color Temperature (K)	4300 (5100 optional)	4300 (5100 optional)
Spot Field (d10) (mm)	160-320	160-320
d10/d50	≥50%	≥50%
CRI(Ra)	95	95
Shadow Dilution with Tube	95%	95%
Shadow Dilution with 1 Mask	75%	73%
Shadow Dilution with 2 Masks	60%	60%
Shadow Dilution with Tube & 1 Mask	70%	68%
Shadow Dilution with Tube & 2 Masks	55%	55%
Illumination Depth (L1+L2)(mm)	≥800	≥800
Radiant Energy (W/m²×Lux)	4	4
Bulb lifetime (hrs)	50,000	50,000



Toplite

Fixed Color Temperature
Multi-reflector Halogen surgical light



DEFT Craft

Fine Reflectors Processing Technique

Up to 2000 Blue Theca & Anodic Oxidation processed reflectors, designed by CAD/CAM, create homogeneous, bright light beam projected to the surgical field, which is true shadowless visually even blocked by surgeon's head or shoulder.

DEFT Cooling

Effective Heat Management

A specially coated endothermic system built in Toplite series helps to absorb the undesired infrared radiation in the light. A cool light without infrared reduces tissue desiccation to an absolute minimum. Less heat provides a pleasant working environment, even for surgeries that last a long time.



DEFT Endurance

Durable and Reliable with Back Solution

Long-lasting OSRAM halogen lamp ensures constant light quality and color temperature over 1,000 hours service time. And back-up bulb switched to optical centre within 0.3 seconds without lighting or quality loss in emergency.



DEFT Mount

Flexible Installation Methods for Your Choice

Ceiling Mount



Mobile Mount



Technical Data

Model	Toplite-7000	Toplite-6000
Lighthouse Dia. (cm)	70	60
Halogen Bulb	150W*1	150W*1
Central Illuminance (KLux)	140-160	120-140
Color Temperature (K)	4200	4200
Spot Field (d10) (mm)	120~320	120~320
d10/d50	≥50%	≥50%
CRI(Ra)	95±5	95±5
Shadow Dilution with Tube	95%	95%
Shadow Dilution with 1 Mask	75%	73%
Shadow Dilution with 2 Masks	60%	60%
Shadow Dilution with Tube & 1 Mask	70%	68%
Shadow Dilution with Tube & 2 Masks	55%	55%
Illumination Depth (L1+L2)(mm)	≥600	≥600
Bulb lifetime (hrs)	1000	1000

Technical Data

Model	FII	F	G	P
Reflector treatment	Anodic oxidation	Blue theca	Blue theca	Blue theca
Dome size	70 and 60cm	70 and 60cm	70 and 60cm	70 and 60cm
Anti-glare	Flat	Flat	Grooved	Grooved
Installation	Ceiling, Wall or mobile system (only one dome for wall or mobile system)			
Dome number	1 (Ceiling, Wall or Mobile system)			
	2 or 3 (Ceiling)	2 or 3 (Ceiling)	2 or 3 (Ceiling)	2 or 3 (Ceiling)
Horizontal swing	Adjustable	Adjustable	Adjustable	Adjustable
Working height	Adjustable	Adjustable	Adjustable	N/A
Working direction	Adjustable	Adjustable	Adjustable	Adjustable



Surgical Documentation

Future Ready

HD Camera System

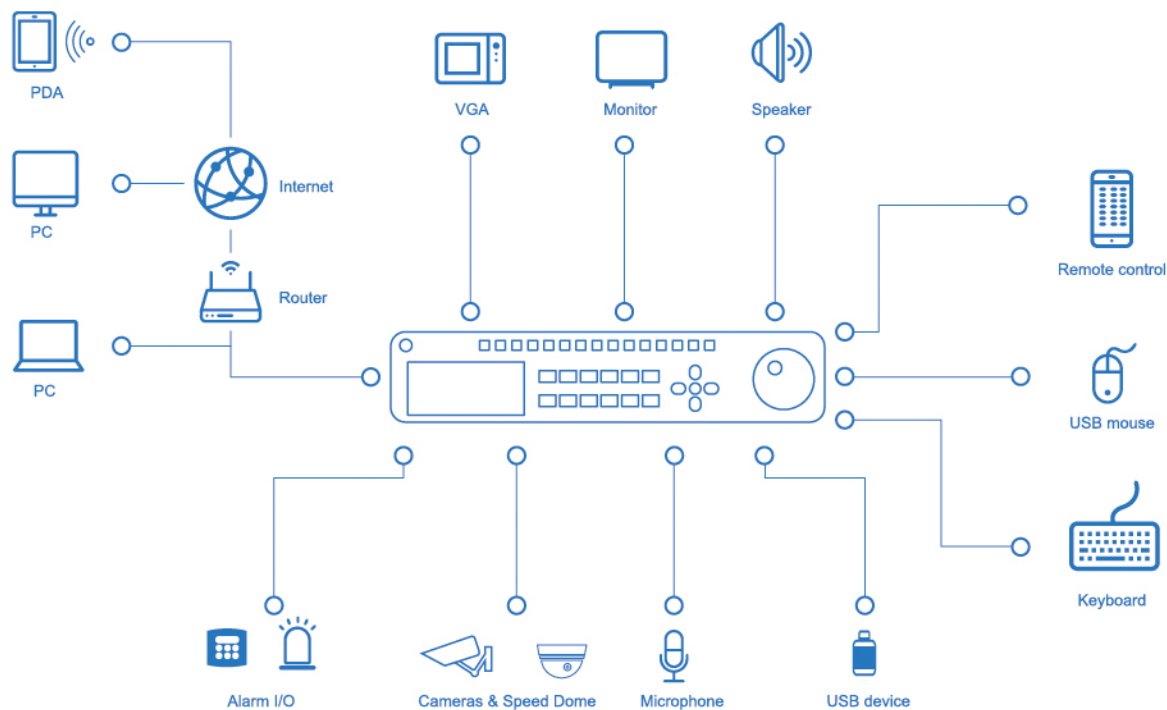
HD Camera can either be integrated into the center of a light head, mounted on wall or installed on a separate suspension arm.



Future Ready

Application in Data and Information Documentation System

Data and information nowadays play a vital role in many surgical, endoscopic and other imaging interventions and procedures. Specifically, digital image documentation of surgical procedures and live operations are increasingly gaining importance. In conjunction with our novel TopSUN LED operating light, the digital camera system from Heal Force gets you directly in touch with what's happening in the OR – live.

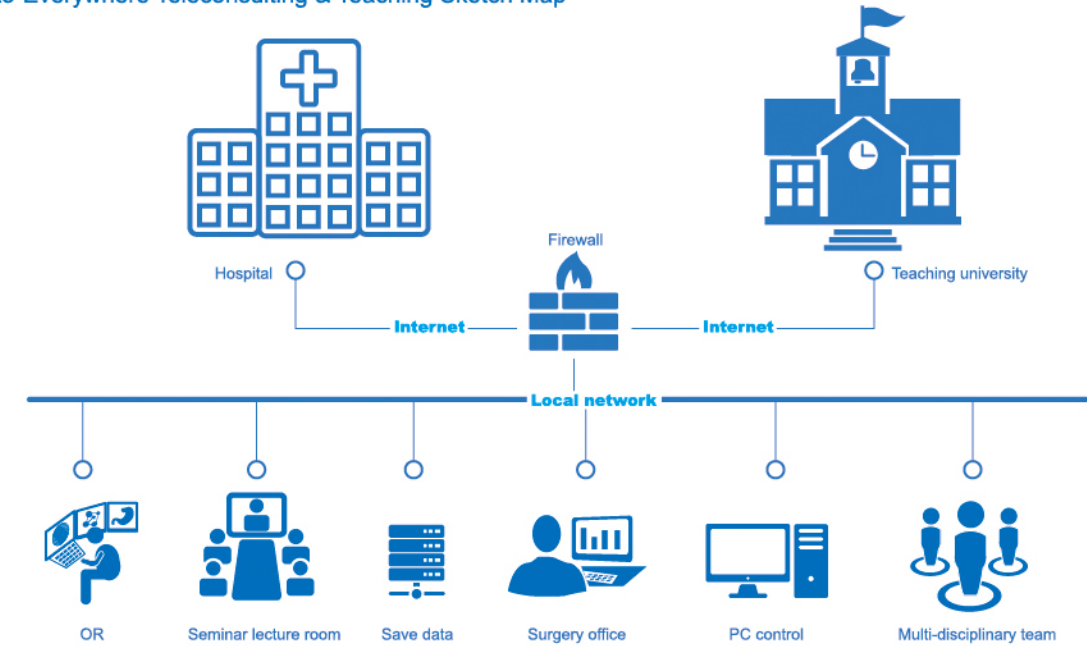


Future Ready

Application in Data and Communication Integration System

To meet individual surgical documentation, teleconsulting, teaching and training needs, Heal Force provide comprehensive surgical monitoring solution to support surgical diagnosis and treatment.

OR-to-Everywhere Teleconsulting & Teaching Sketch Map



Technical Data

Video camera system(Optional)

CCD sensor	1/4" Interline Transfer Super HAD CCD	1/4" Interline Transfer Super HAD CCD
Scan system	PAL, 625 lines, 25 frames/sec	PAL, 625 lines, 25 frames/sec
Effective Pixels	752(H)×582 (V)	752(H)×582 (V)
Horizontal resolution	480	480
Aspect Ratio	4:3	4:3
S/N Ratio (dB)	>52	>52
Lens	22×optical zoom lens, 10×digital zoom	22×optical zoom lens, 10×digital zoom
Lens control	Independent control system	Independent control system
Focal length (mm)	f=3.6 to 79.2	f=3.6 to 79.2
Focus	Automatic, manual	Automatic, manual
Aperture	Automatic, manual	Automatic, manual
Shutter	Automatic, fixed	Automatic, fixed
White balance	Automatic, manual	Automatic, manual
Minimum luminance	0.01Lux	0.01Lux
Video output	VBS 1.0Vp-p, 75Ω	VBS1.0Vp-p, 75Ω
Picture in picture function	Yes	Yes
Backlight Compensation	On/Off	On/Off
Location of camera	Center of the lighthead/separate arm	Center of the lighthead/separate arm
Camera operation	At the surgica light/ mobile control unit	At the surgica light/ mobile control unit
Serial link interface	RS485	RS485
Power consumption(VA)	5	5

* Optional installation height may require special suspension arm or extra accessories.

Worldwide Coverage

- 3 R&D centers & 9 manufacturing plants in China
- Sales coverage over 120 countries





TopSUN

Select Guide

Model	TopSUN	TopLED	Toplite
Light Source	LED	LED	Halogen
CRI (Ra)	≥95	95	90±5
Color Temperature	Adjustable	Fixed	Fixed
Endo Mode Lighting	Standard	Optional	N/A
Bulb Service Time	50,000hrs	50,000hrs	1,000hrs
Intuitive Control	Keypad / IR / Wall	Keypad / IR	Keypad



TopLED



Toplite

Medical-grade Monitor Specification



Model No.	LMD-2110W
Size	21.5"
Picture Performance	a-Si TFT Active Matrix LCD
Type	1920 x 1080 pixels
Resolution	18 7/8 x 10 5/8 inches (477 x 268 mm), 21 5/8 inches (547 mm)
Effective picture size (H x W) (diagonal)	16:9
Aspect	16.7 million colors
Colors	170°/160° (typical) (horizontal/vertical contrast>10:1)
Viewing angle	
Input	BNC (x1), 1.0 Vp-p ±3dB sync negative
Composite	Mini DIN 4-pin (x1) Y: 1.0 Vp-p ±3dB sync negative,
Y/C	C: 0.286 Vp-p ±3dB (NTSC burst signal level), 0.3 Vp-p ±3dB (PAL burst signal level) BNC (x3) RGB : 0.7 Vp-p ±3dB (sync on green, 0.3 Vp-p sync negative)
RGB, Component	0.7 Vp-p ±3dB (75% chrominance standard color bar signal)
HDMI	HDMI (x1)
Audio	Phono jack (x2), -5 dBu 47 kilohms or higher OPTION AUDIO IN: Phono jack (x1), -5 dBu 47 kilohms or higher
External sync	BNC (x1), 0.3 Vp-p to 4 Vp-p negative polarity binary
Option in connector	D-sub 9-pin (x1), female
Parallel remote	Modular connector 8-pin (x1) (pin-assignable)
Output	
Composite	BNC (x1), loop-through, with 75 ohms automatic termination
Y/C	Mini DIN 4-pin (x1) loop-through, with 75 ohms automatic termination
RGB, Component	BNC (x3), loop-through, with 75 ohms automatic termination
External sync	BNC (x1), loop-through, with 75 ohms automatic termination
Audio monitor out	Phono jack (x2), loop-through
Speaker (built-in)	0.5 W (mono)

Medical-grade Monitor Specification



Model No.	MS263P
Size	26"
Power	External power 24V
Resolution	1920*1080
Aspect ratio	16:9
Highest brightness	900cd/㎡
Contrast ratio	1400: 1
Viewing angle	178/178
Response time	8MS
Size	637*415.5*85.5 MM (W*H*D) (without stand)
Install standard	VESA 100*100MM
Energy saving	EPA, VESA
MTBF	> 30,000hours
Brightness	Brightness stabilization system
Input port	2*DVI/VGA/DP/SDI
Output port	DVI/SDI
Supply	Endoscopy/Electronicgastroscope/Laparoscope/Surgical visual field monitor
Certifications	CCC/ CE

HD-camera specification



Lens	Optical Zoom 20X (F=4.7Mm~94.0Mm) F1.6(Wide)~F3.5(Tele)
Image Sensor	1/2.9" CMOS 2.1M
Scanning Mode	Progressive Scan
Zoom Movement Speed	Optical:2.0Sec (Variable)/ Digital:4.0Sec
Digital Zoom	16X (320X With Optical Zoom)
Min. Working Distance	30Mm (Wide End),1000Mm (Tele End)
Focusing System	Auto,One Push Af,Manual
Effective Pixels (Hxv)	1920X1080
Image Size	1920X1080,1280X720
Recommended Illumination	100 Lx ~100,000 Lx
Back Light Compensation	Yes (ON/OFF)
Electronic Shutter Speed	1/30 Sec - 1/60,000 Sec (Steps)
White Balance	Auto,Autoext (Sodium Vapor Lamp), Preset (One Push), Manual
Ae Control	Auto, Iris Manual, Shutter Manual
Wide Dynamic Range	Yes (On/Off, Max 15 Fps)
True Day And Night (Icr)	Yes
Noise Reduction (2D,3D)	Yes (On/Off)
Slow Shutter	Yes
Color Enhancement	Yes
Aperture Control	Yes
Video Flip /Mirror /Freeze	Yes
Defog	Yes
Lens Shading	Yes
Defect Suppression	Yes
VIDEO	
Resolution	1080p@30fps,720p@60fps
Composite out	700tvl.ntsc/pal selectable
IN/OUT	
Video Out	HD: digital (sdi), sd: analog (cvbs)
RS232C	Yes
Day & Night Ext-in	Yes
Alarm-Out (Motion Detect)	Yes
Alarm-In	Yes
Camera Control	Osd (Joystick Switch), External Remote Control (Adkey), RS485