SONY

NTSC

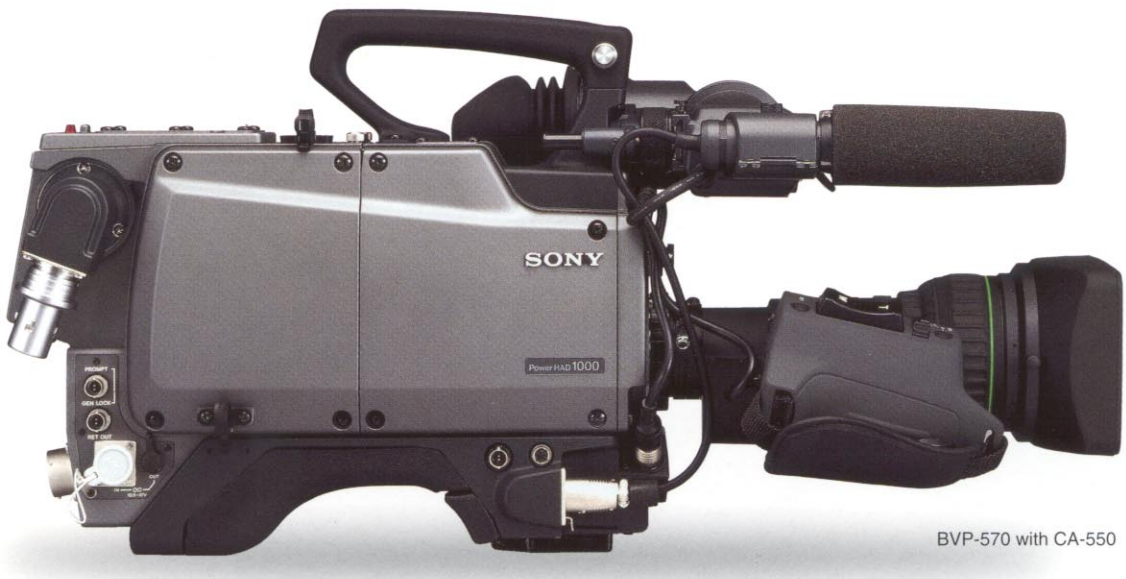
3-chip CCD Portable Color Video Camera

BVP-570

Preliminary

BVP-570
Sony Color Video Camera

The BVP-570 is the latest addition to the BVP-550 high-end portable broadcasting camera family. Using a newly developed Power HAD ™ 1000 CCD imager, advanced Digital Signal Processing and 12-bit AD converter, it realizes a number of distinct improvements to overall picture quality. Highlight handing and signal to noise ratio are significantly improved and they both expand picture-making capabilities and overall image quality. This is the perfect camera for both the freelance shooter and for studio/production use. For news gathering and documentary work, the BVP-570 produces superb picture quality under low light shooting conditions. For station and production use, it combines this same picture capability with an extended range of creative video controls. More sophisticated control over image enhancement allows picture sharpness to be optimized for all forms of scene content. A more flexible control on over-exposed pictures allows creative and artistic adjustments to produce images that rank with the famed 'film look.'



BVP-570 with CA-550

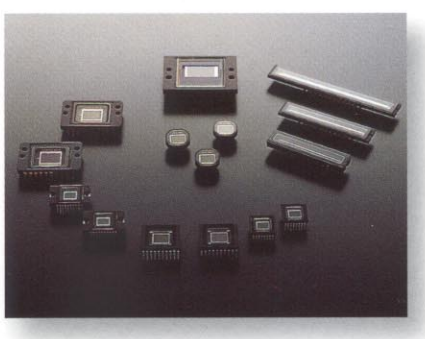
Newly Developed DSP

The newly developed advanced DSP enhances basic resolution, increases signal to noise performance, extends image enhancement capabilities, provides more flexible control of colorimetry and adds greater control for over-exposed signal levels.

Powerful 2/3-inch Power HAD CCD

Power HAD 1000 CCD technology realizes both high sensitivity and low smear level. Of particular significance, the IT Wide Switchable CCD achieves a very low smear level equal to 1st generation FIT CCDs. A very high S/N ratio is realized and shooting under low-lighting condition is considerably improved with the Power HAD CCD imager.

- ***Number of Pixel:*** *520K*
- ***Sensitivity:*** *F8 at 2000 lx (89.9% reflective)*
- ***Smear Level:*** *-145dB(FIT)/-120dB(IT)*



Precise and Flexible Handling of High-light Position

Adaptive Highlight Control

Normal

Adaptive Highlight Control

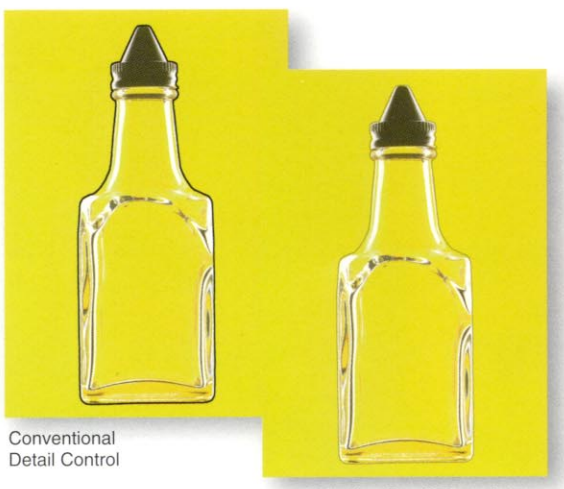
Knee Saturation Control

Normal

Knee Saturation Control

Advanced Detail Control

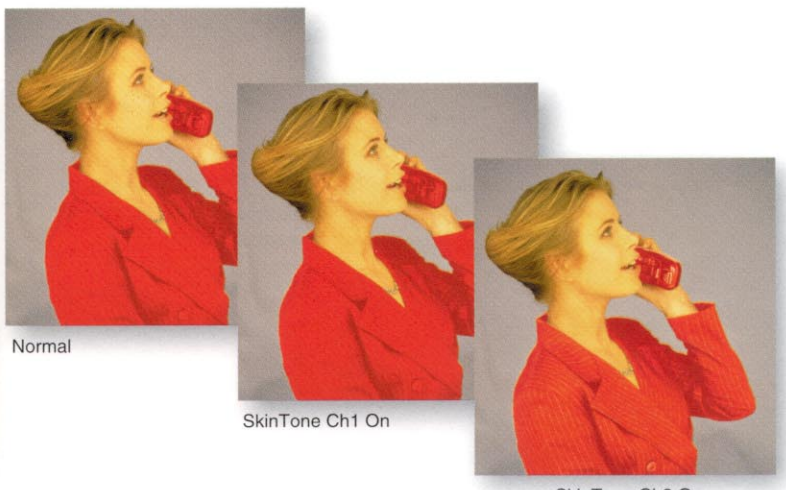
Adaptive Detail Control



Conventional Detail Control

Adaptive Detail Control

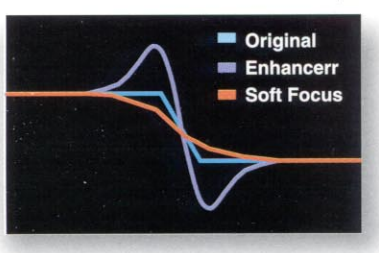
Triple Skintone Detail Control



Normal

SkinTone Ch1 On

SkinTone Ch2 On



Electronic Soft Focus: *This function of the BVP-570 has an effect similar to a Soft Optical Filter. This function subtracts the 2-dimensional edge signal from the original video signal. Especially, in the case of combining with the Skin Tone Detail function, a human face can be creatively softened.*

Precise Control and Other Functions

Skin Tone Auto Iris: *Skin Tone Auto Iris is a function which automatically controls the iris in a manner that avoids video level changes in a selected portion of the scene (such as a face selected by the Skintone Detail function). Skintone Auto Iris is particularly useful for the news studio. If the color phase is adjusted to the face tone of the announcer, then the Iris automatically maintains the same video level even if the announcer turns the script sheets, or if other people (wearing bright shirts or blouses) enter the scene.*
Digital Encoder/Digital VBS Gen Lock System is available.
NTSC/PAL compatible operation is enabled.

Flexible System Operation

The BVP-570 realizes full interface compatibility with any Sony Camera Control Unit, CCU-700A and CCU-550, and can easily be exchanged between these two CCUs allowing for convenient OB/EFP system reconfiguration. This also allows the BVP-570 studio configuration to be integrated with the BVP-900 Series, BVP-700 Series and BVP-500 Series conventional camera via Sony's MSUs, CNUs and RCPs.

CCU-550 with BKP-5973

RCP-741

Wide Band Triax Transmission System

The BVP-570 is intended for maximum picture performance in outside broadcast applications in addition to the production studio. Major sporting and entertainment events regularly call for extended runs of the triaxial cable connecting the camera head unit to the remote CCU. Sony's triax system extends the video transmission bandwidth (luminance signal: 10MHz, color difference signals: 6MHz,) while it steadfastly maintains the philosophy of a Y/R-Y/B-Y component triax system. This Y/R-Y/B-Y triax system has the distinct advantage of avoiding differential timedelay between R/G/B channels (which may reduce luminance horizontal resolution and defeat the CCD spatial offset alias-reduction on extended cable runs.) The following benefits are provided by the new Sony wideband triax system.

Wideband system operates with exceptionally low noise and thus delivers the full video performance created in the camera head to the remote CCU output.

More efficient handling of increased bandwidth demands of 16:9 widescereen operation can be by Y/R-Y/B-Y operation.

The Sony Y/R-Y/B-Y wideband triax system allows long triax operation up to 2000m via ϕ14.5mm cable (1000m via ϕ8.5mm cable) without compromises in luminance resolution and alias-reduction.

Advanced Filing System

The BVP-570 can store various filing data in the camera head unit, including reference file, scene files and OHB data file. The same data can be also stored in an IC card that plugs into the MSU-700, and this information can access other cameras via the network and CNU-700/500. The video engineer can thus remotely and rapidly set up each camera head within a multi camera operation.

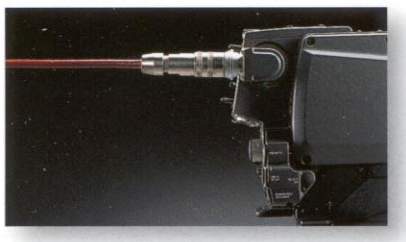
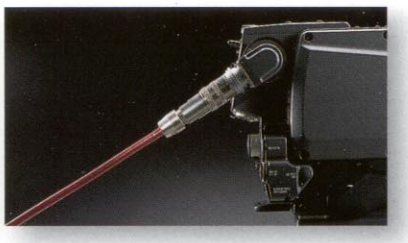
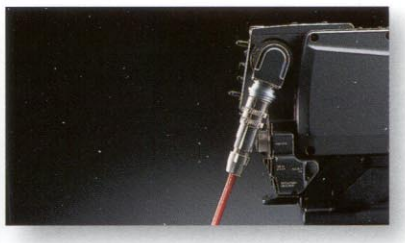
MSU-700

IC Memory Card

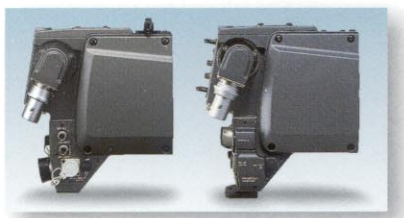
Easy Maintenance and Reliability with Ergonomic Design

BVP-570

- *Various CCD block*
- *Rotary type triax connector*

- *Various camera adaptor can be used with BVP-570*



CA-550 and CA-570 for Triaxial Output

CA-530 for SDI and VBS Output

CA-553 for Dockable VTR

CA-570

- *Control panel on the rear side enables easy operation when usedwith 5-inch view finder*
- *Two channels of Intercom*
- *Interface with Tracker and Return switch box*
- *Return signal select switch*
- *Prompter out*
- *Reverse Trunk Video (Camera to CCU) is enabled*
- *Can be used with BVP-550 and BVP-570*

OHB Series

- ***OHB-550:*** *4:3 FIT, with two filter wheels*
- ***OHB-550WS:*** *16:9/4:3 Switchable FIT, with two filter wheels*
- ***OHB-455WS:*** *16:9/4:3 Switchable IT, with two filter wheels*
- ***OHB-450:*** *4:3 IT, with servo-controlled filter*
- ***OHB-451:*** *4:3 IT, a filter wheel*

Note: *The BVP-570 is not supplied with a CCD block.*
At least one should be ordered with a camera.
Wide Screen DSP Board:BKP-5091 is required for Switchable use.

OHB-T450WS

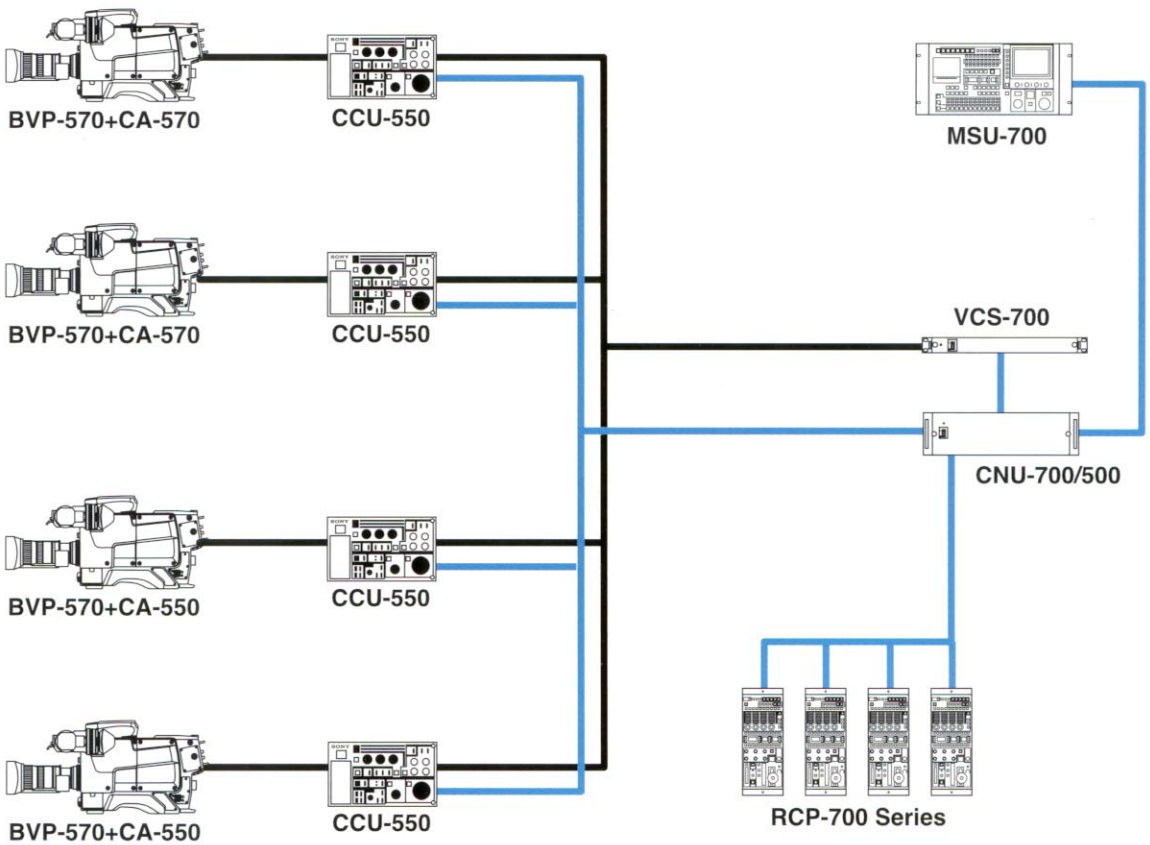
OHB-T450WS is a newly designed telescopic CCD block which offers a number of important shooting flexibilities in a variety of shooting situations where ready access with a conventional camera is difficult or impossible.

- *16:9/4:3 Switchable Power HAD IT*
- ***Number of Pixel:*** *520K*
- ***Sensitivity:*** *F8 at 2000 lx (89.9% reflective)*
- ***Smear Level:*** *-120dB*
- ***Signal to Noise ratio:*** *65dB (with BVP-570)*
- ***Horizontal Resolution:*** *700TVL*

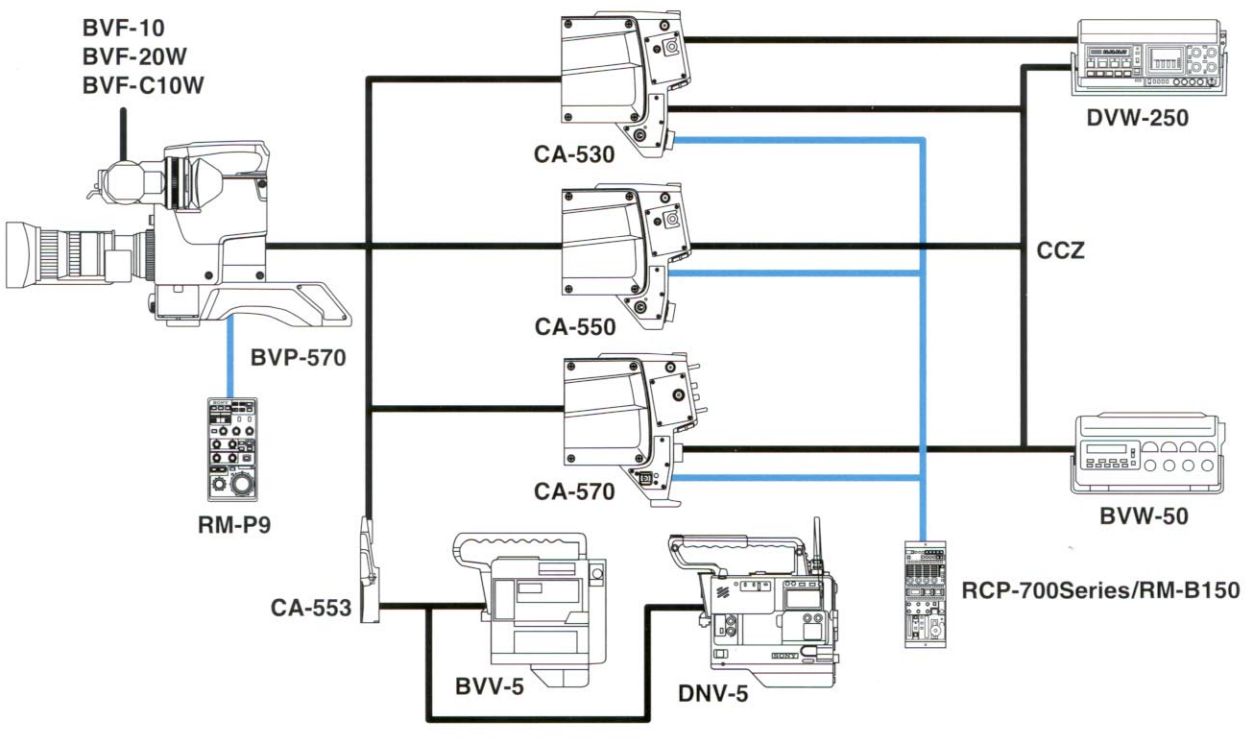
Note: *Wide Screen DSP Board:BKP-5091 is required for Switchable use.*

System Configuration

■ PRODUCTION/OB VAN/STUDIO



■ PORTABLE SYSTEM



Optinal Accessories

BVF-55
5-inch Electronic B/W Viewfinder

BVF-10
1.5-inch 4:3 B/W Viewfinder

BVF-20W
2.0-inch 16:9 B/W Viewfinder

BVF-C10W
1.35-inch 16:9 Color Viewfinder

CAC-6
Return Video Selector

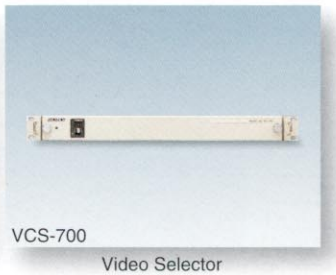
CAC-12
Mic Holder

CCU-700A
Camera Control Unit

CCU-550 with BKP-5973
Camera Control Unit

CNU-700
Camera Command Network Unit

CNU-500
Camera Command Network Unit



VCS-700
Video Selector

RM-B150
Remote Control Unit

RCP-700
Remote Control Panel

RCP-701
Remote Control Panel

RCP-720
Remote Control Panel

RCP-721
Remote Control Panel

RCP-740
Remote Control Panel

RCP-741
Remote Control Panel

BKDW-701
Servo Filter Unit

OHB Specification

	OHB-450/451	*OHB-550*	*OHB-550WS*	*OHB-455WS*	*OHB-T450WS*
Pickup device	3-chip 2/3-inch IT	3-chip 2/3-inch FIT	3-chip 2/3-inch FIT	3-chip 2/3-inch IT	3-chip 2/3-inch IT
	4:3 Standard	4:3 Standard	16:9/4:3 Switchable (with BKP-5091)	16:9/4:3 Switchable (with BKP-5091)	16:9/4:3 Switchable (with BKP-5091)
Picture elements	1038 (H) x 504 (V)	1038 (H) x 504 (V)	1038 (H) x 504 (V)	1038 (H) x 504 (V)	1038 (H) x 504 (V)
Specuram system	F1.4 prism system	F1.4 prism system	F1.4 prism system	F1.4 prism system	F1.4 prism system
Color filter-A	-	Cross	Cross	Cross	-
-B	-	3200K	3200K	3200K	-
-C	-	4300K	4300K	4300K	-
-D	-	6300K	6300K	6300K	-
ND filter-1	3200K	Clear	Clear	Clear	3200K
ND filter-2	5600K+1/4ND	1/4 ND	1/4 ND	1/4ND	5600K+1/4ND
ND filter-3	5600K	1/16 ND	1/16 ND	1/16ND	5600K
ND filter-4	5600K+1/16ND	1/64 ND	1/64 ND	1/64ND	5600K+1/16ND
Servo filter unit	For OHB-451 only	Yes (Option)	Yes (Option)	Yes (Option)	-
Sensitivity	F8.0 at 2000 lx (3200K, 89.9% reflectance)	F8.0 at 2000 lx (3200K, 89.9% reflectance)	F8.0 at 2000 lx (3200K, 89.9% reflectance)	F8.0 at 2000 lx (3200K, 89.9% reflectance)	F8.0 at 2000 lx (3200K, 89.9% reflectance)
Minimum illumination	2 lx (F1.4, +30dB gain up)	2 lx (F1.4, +30dB gain up)	2 lx (F1.4, +30dB gain up)	2 lx (F1.4, +30dB gain up)	1 lx (F1.4, +36dB gain up, DPR mode)
S/N	65dB	65dB	65dB	65dB	65dB
Smear level	-105dB	-145dB	-145dB	-120dB	-120dB
Horizontal resolution	900TVL	900TVL	700TVL	700TVL	700TVL
Vertical resolution	400TVL 450TVL (withEVS)	400TVL 450TVL (withEVS or SuperEVS)	400TVL 450TVL (withEVS or SuperEVS)	400TVL 450TVL (withEVS)	400TVL 450TVL (withEVS)
Geometoric distortion	Below measurable level (w/o lens)	Below measurable level (w/o lens)	Below measurable level (w/o lens)	Below measurable level (w/o lens)	Below measurable level (w/o lens)
Shutter speed selection	1/100,1/125,1/250, 1/500,1/1000,1/2000	1/100,1/125,1/250, 1/500,1/1000,1/2000	1/100,1/125,1/250, 1/500,1/1000,1/2000	1/100,1/125,1/250, 1/500,1/1000,1/2000	1/100,1/125,1/250, 1/500,1/1000,1/2000
Gain selection	-3dB,0dB,+3dB,+6dB,+9dB, +12dB, +18dB,+24dB,+30dB	-3dB,0dB,+3dB,+6dB,+9dB, +12dB, +18dB,+24dB,+30dB	-3dB,0dB,+3dB,+6dB,+9dB, +12dB, +18dB,+24dB,+30dB	-3dB,0dB,+3dB,+6dB,+9dB, +12dB, +18dB,+24dB,+30dB	-3dB,0dB,+3dB,+6dB,+9dB, +12dB, +18dB,+24dB,+30dB
Clear scan selection	60.1~7000Hz	30.4~7000Hz	30.4~7000Hz	60.1~7000Hz	60.1~7000Hz
Modulation depth at 5MHz	More than 70%	More than 70%	More than 70%	More than 70%	More than 70%
Power consumption (with BVP-570)	19W	19.5W	21W	20W	22W
Operating temperature	-20 to +45°C (-4 to +113°F)	-20 to +45°C (-4 to +113°F)	-20 to +45°C (-4 to +113°F)	-20 to +45°C (-4 to +113°F)	-20 to +45°C (-4 to +113°F)
Storage temperature	-20 to +50°C (-4 to +122°F)	-20 to +50°C (-4 to +122°F)	-20 to +50°C (-4 to +122°F)	-20 to +50°C (-4 to +122°F)	-20 to +50°C (-4 to +122°F)

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