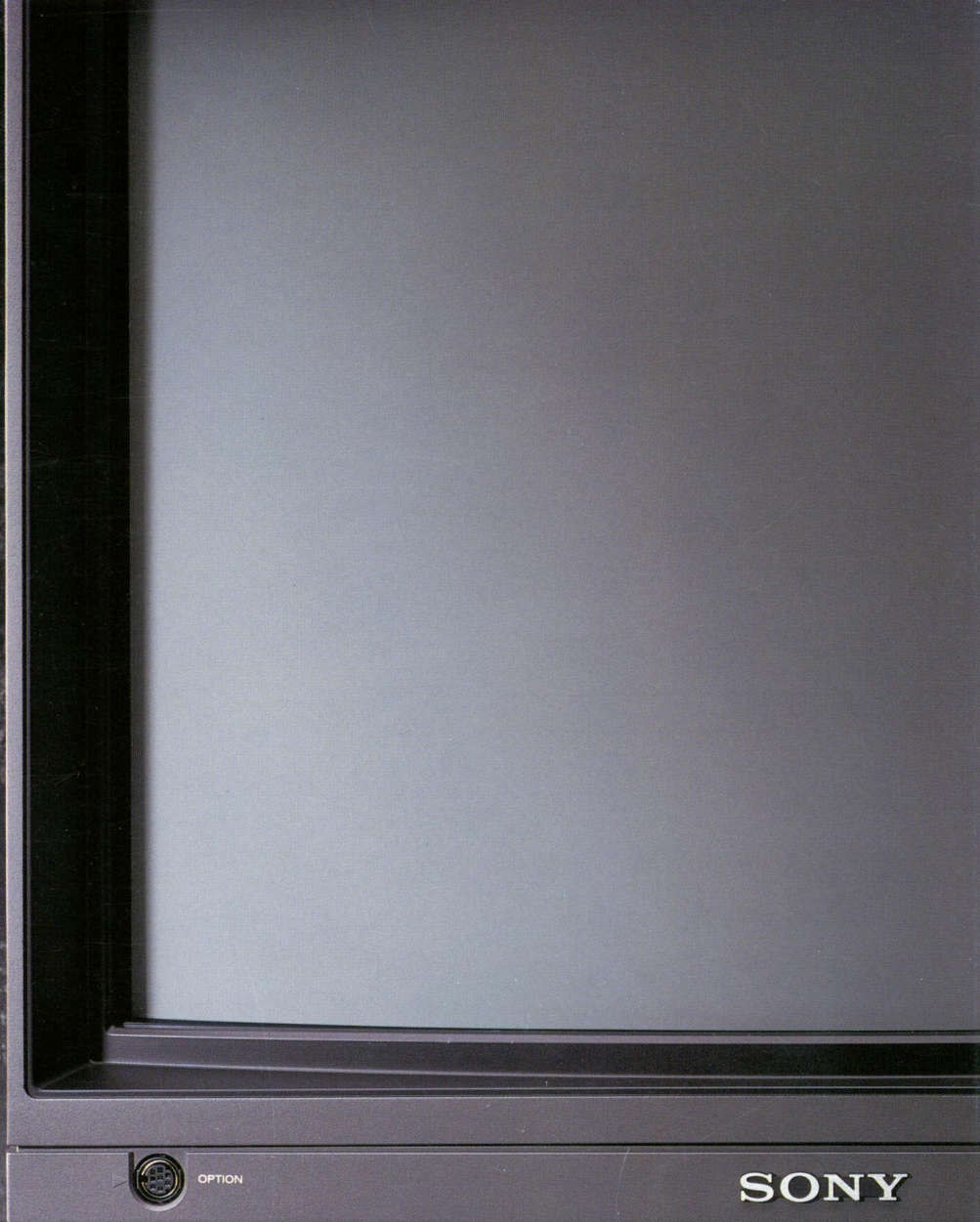


SONY®



BROADCAST AND PROFESSIONAL  
MONITORS

# BVM Series



**ISR** Interactive  
Status  
Reporting

NTSC area

# Unmatched Flexibility and Expandability Guaranteed with Precise, Stable Performance

Innovative design is the key to the outstanding flexibility of the new BVM Series monitors from Sony.

Models which are divided into separate display and control units provide major improvements in both systemization and flexibility and are complemented by units of classic, stand-alone construction.

These BVM Series monitors are also operationally flexible in that they are readily customized to customer needs.

Desired functions are implemented with a wide range of optional decoder adapters which simply slot directly into the monitor rear panel.



◆ BVM-14F5U

◆ BVM-14F1U

◆ BVM-20F1U

The monitors are also packed with advanced features to enhance system operation:  
a new Auto Alignment system for automatic monitor set-up,  
monitor memory card for storage and transfer of user and monitor data.

Features for future use and ease of set-up are  
all combined into this exciting range of monitors.

BVM Series monitors provide precise reproduction of video signals with a  
resolution of over 1000TV lines in the highest grade monitor and close tolerance  
SMPTE-C phosphors found in the entire line-up of the new BVM Series monitors.

The superior levels of performance are made possible by the use of  
new CRTs that are designed by Sony and manufactured in its own production  
facilities to the most exacting quality control standards.

## The BVM Series—a true revolution in high performance video monitoring



◆ BVM-20E1U



◆ BVM-14E1U



◆ BVM-14E5U



◆ BKM-10R

# FEATURES

## SUPERB PICTURE REPRODUCTION

- Newly developed HR Trinitron® assures high resolution

### 20-inch display units\*

BVM-20E1U	Super grade 1	More than 1000TV lines
BVM-20F1U	Grade 1	900TV lines

### 14-inch display units\*

BVM-14E1U	Super grade 1	900TV lines
BVM-14F1U	Grade 1	800TV lines

### 14-inch stand-alone monitors

BVM-14E5U	Super grade 1	900TV lines
BVM-14F5U	Grade 1	800TV lines

\*Display units are controlled with the control unit BKM-10R or BKM-11R.

- SMPTE-C standard phosphors
- Sony manufactured CRTs provide superb uniformity of performance
- Highly stable color temperature from beam current feedback circuitry

## SYSTEM FLEXIBILITY

- New operating concept from divided type construction with separate display and control units



BVM-20E1U



Control unit BKM-10R

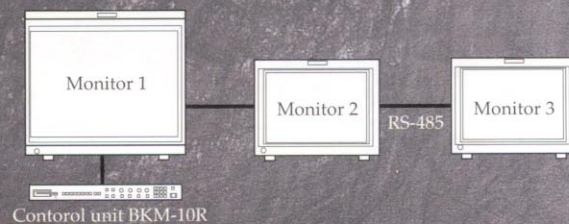
- Can be used as a conventional display combining separate type display with the BKM-10R control unit and the BKM-32H control unit attachment kit.



BVM-20E1U

- Desired functions achieved by inserting optional decoder adapters directly into the rear panel
- Memory card BKM-12Y available as an option for easy monitor set-up and Sony Interactive Status Reporting (ISR) System.
- RS-485 serial remote control and parallel remote control capability
- Supported by the Sony Interactive Status Reporting (ISR) system for remote monitor diagnosis
- Mountable into an EIA standard rack

### Remote control over multiple display units



A maximum of 32 monitors can be controlled via RS-485 which enable mutual communication between the monitors and one BKM-10R control unit.

# OPTIONAL ACCESSORIES

		DIGITAL DECODER		ADAPTER
		SDI 4:2:2	SDI Multi	SDI expansion
		BKM-20D	BKM-21D	BKM-22X
Type of decoder		Digital	Digital	—
SDI (Serial Digital Input)	D1 525/625	●	●	●
	D2 NTSC	●	●	●
	D2 PAL	●	●	●
Analog Input	Composite NTSC	●	●	●
	Composite PAL	●	●	●
	Composite PAL-M	●	●	●
	Composite SECAM	●	●	●
	Y/R-Y/B-Y 525/625	●	●	●
	RGB 525/625	●	●	●
	Y/C NTSC	—	—	—
	Y/C PAL	—	—	—
	Y/C PAL-M	—	—	—
Number of input for DIGITAL		3	3	3
Number of input for ANALOG		3	3	3

## OTHER OPTIONAL ACCESSORIES

CONTROL UNIT	MEMORY CARD	AUTO SET-UP PROBE	16:9
			
BKM-10R	BKM-11R	BKM-12Y	BKM-14L
			BKM-33H20



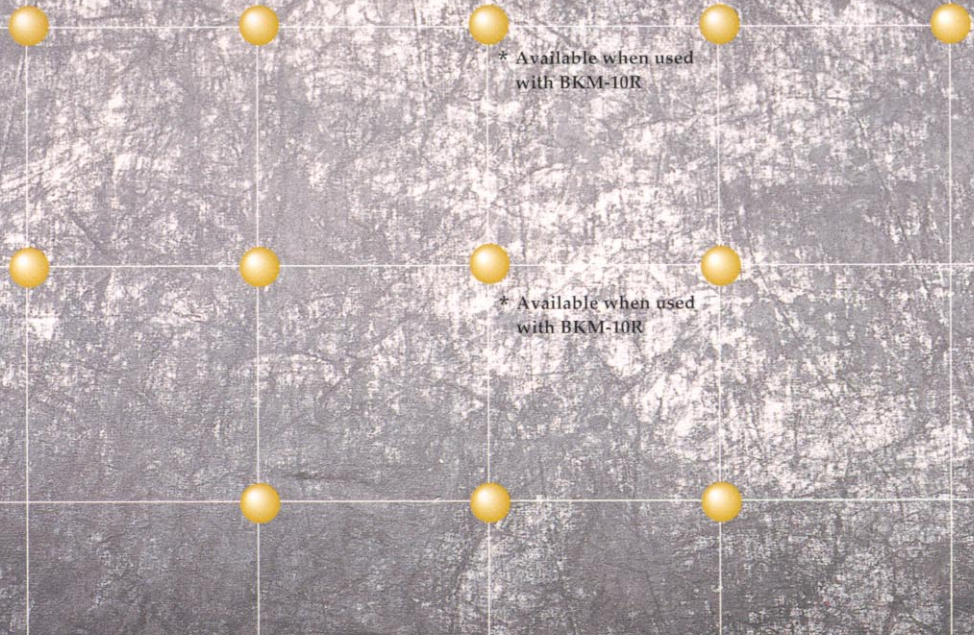
BVM-20E1U/20F1U



BVM-14E1U/14F1U



BVM-14E5U/14F5U



\* Available when used  
with BKM-10R

\* Available when used  
with BKM-10R

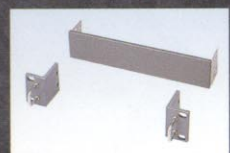
ANALOG DECODER				ADAPTER
NTSC	PAL	PAL-M	3 standard	Analog expansion
BKM-24N	BKM-25P	BKM-26M	BKM-27T	BKM-28X
Precision Analog	Precision Analog	Precision Analog	Analog	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
—	—	—	—	—
6	6	6	6	6

● Signals can be reproduced with this adapter. ● Signals can be reproduced when combined with an appropriate decoder.

MASK	19-inch RACK MOUNT KIT			CONTROL UNIT ATTACHMENT KIT
				
BKM-33H14	BKM-30E20	BKM-31E14	BKM-30E14	BKM-32H



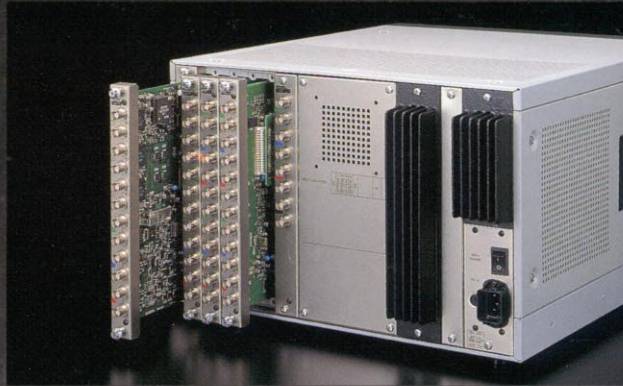
Control cable  
RCC-5G/10G/30G  
(9-pin cable for RS-485/422 serial remote control)



19-inch rack mount kit for  
BKM-10R  
MB-510

# DECODER ADAPTERS

All inputs—other than the analog component (Y/R-Y/B-Y)/RGB inputs included as standards—can be customized to meet specific applications by fitting appropriate slot-in type modules. These decoder adapters—common throughout all models—are designed to be directly fitted into the rear panel, making board exchange quick and simple.



## CONVENIENT OPERATING FEATURES

- Built-in auto alignment system for easy set-up
- Precise color temperature adjustment with an optional auto setup probe BKM-14L or a color analyzer via RS-232C interface (i.e. Minolta CA-100, Graseby SLS-9400, Philips PM-5639 and Thoma TF-6)

CA-100	
COL1	
D65	
D93	
X	0.313
Y	0.329
LOWLIGHT (20IRE)	2.7
HIGHLIGHT (100IRE)	100
START	

- On-screen menu for adjustment and operation

INPUT CONFIGURATION	↑↓	STATUS (3/3)	↑↓
CH01		SLOT1 CONTROL	
■FORMAT ... ANA AUTO		SLOT2 SDI 4:2:2/4FSC	
SLOT NO SLO3		■SLOT3 NTSC DECODER	
INPUT NO 1		SLOT4 TRI-STANDARD	
YC SEP 3 LINES COMB		SLOT5 ANALOG EXPANSION	
SYNC MODE INT		SLOT6 VIDEO AMP	
SCREEN MODE ... 4:3-NORM		SLOT7 DEFLECTION	
SAFE AREA OFF		SLOT8 EMPTY	
SCALE ... 80		SLOT9 POWER SUPPLY	
APERTURE OFF			
VALUE 100			

- Auto setup capability of chroma, phase, setup level and white balance
- Aspect ratio switchable between 4:3 and 16:9, with a widescreen mask available as an option



BKM-33H14 attached to  
BVM-14E5U



BKM-33H14 attached to  
BVM-14E1U



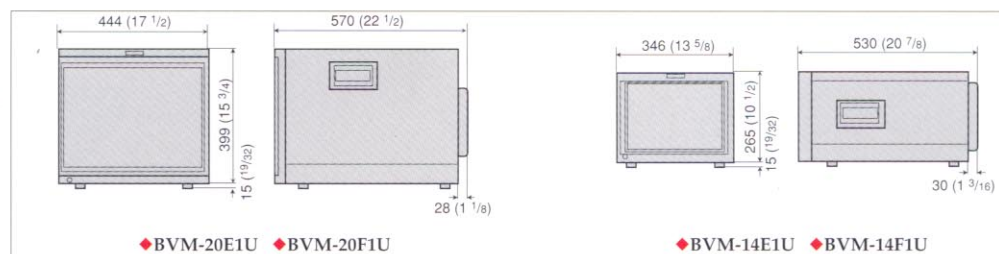
BKM-33H20 attached to  
BVM-20E1U

# SPECIFICATIONS

		20-inch (display units)	
		BVM-20E1U	BVM-20F1U
<b>General</b>			
System	525 lines 60 fields or 625 lines 50 fields interlace		
Power requirements	AC 100 to 240V, 50/60Hz		
Power consumption	200W (max.), 2.0 to 1.7A/1.0 to 0.9A		
Dimensions	444 (W) x 414 (H) x 570 (D)mm (17 1/2 x 16 3/8 x 22 1/2 inches)		
Mass	37kg (81 lb 9 oz)		
<b>CRT performance</b>			
CRT type	HR Trinitron CRT with SMPTE-C phosphors AG pitch: 0.25mm, 90° deflection, Ø30.6 in-line gun Center resolution more than 1000TV lines	HR Trinitron CRT with SMPTE-C phosphors AG pitch: 0.30mm, 90° deflection, Ø30.6 in-line gun Center resolution 900TV lines	
Screen size	Diagonal: 482mm (19 inches) Width: 386mm (15 1/4 inches) Height: 291mm (11 1/2 inches)		
Color temperature	PRESET: Factory adjusted for D65 white MANUAL control is also available, allowing alternative setting of color temperature		
Preset brightness	100cd/m <sup>2</sup> (30ft-L) (when a 1Vp-p 100% white signal is input)		
<b>Input performance</b>			
Inputs	Loop-through BNC (x3)		
RGB	R/B	0.7Vp-p ±6dB, high impedance	
	G	1.0Vp-p ±6dB, sync negative, high impedance	
Analog component	Y	1.0Vp-p ±6dB, high impedance	
	R-Y/B-Y	0.7Vp-p ±6dB, high impedance	
External sync	Loop-through BNC (x1) 0.3 to 8Vp-p negative, high impedance		
Return loss	More than 46dB (7MHz when 75Ω terminated)		
Remote control inputs	Remote 1: Loop-through D-sub 9-pin (for RS-485 serial remote control) Remote 2: D-sub 9-pin		
ISR	D-sub 9-pin		
<b>Video signal performance</b>			
Differential gain	Within 2% for luminance from 0 to 100cd/m <sup>2</sup> (0 to 30ft-L)		
Differential phase	Within 2° for luminance from 0 to 100cd/m <sup>2</sup> (0 to 30ft-L)		
Frequency response	100Hz to 10MHz ±1dB		
DC restoration	Back porch type, back porch level: within 1% of peak luminance, 10 to 90% APL		
<b>Synchronization</b>			
AFC time	Fast mode: 0.5ms Normal mode: 2ms		
Horizontal hold	±500Hz (when AFC 0.5ms)		
Retrace time	Horizontal: Normal; within 1ms, Underscan; within 0.8ms Vertical: within 10μs		
<b>Raster and picture performance</b>			
Normal scan	5% over scan of the effective picture area		
Underscan	3% underscan of the effective picture area		
Stability of raster size	1% of picture height for a 10 to 90% APL change when 100% peak white is set to 100cd/m <sup>2</sup> (30ft-L) brightness		
Linearity	Within 0.5% within circle centered on the screen with a diameter equal to the vertical height, 1% at any other point		
Convergence	Within 0.4mm within circle centered on the screen with a diameter equal to the vertical height, 0.7mm at any other point		
<b>Operating conditions</b>			
Operating temperature range	0 to 40°C (32 to 104°F) Optimum operating range 20 to 30°C (68 to 86°F)		
Humidity	0 to 90% non-condensing		
Altitude	Approx. 3,050m (10,000ft)		

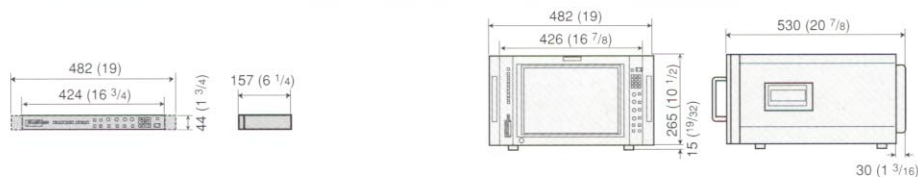
		20-inch (display units)	
		BVM-20E1U	BVM-20F1U
<b>General</b>			
System	525 lines 60 fields or 625 lines 50 fields interlace		
Power requirements	AC 100 to 240V, 50/60Hz		
Power consumption	200W (max.), 2.0 to 1.7A/1.0 to 0.9A		
Dimensions	444 (W) x 414 (H) x 570 (D)mm (17 1/2 x 16 3/8 x 22 1/2 inches)		
Mass	37kg (81 lb 9 oz)		
<b>CRT performance</b>			
CRT type	HR Trinitron CRT with SMPTE-C phosphors AG pitch: 0.25mm, 90° deflection, Ø30.6 in-line gun Center resolution more than 1000TV lines	HR Trinitron CRT with SMPTE-C phosphors AG pitch: 0.30mm, 90° deflection, Ø30.6 in-line gun Center resolution 900TV lines	
Screen size	Diagonal: 482mm (19 inches) Width: 386mm (15 1/4 inches) Height: 291mm (11 1/2 inches)		
Color temperature	PRESET: Factory adjusted for D65 white MANUAL control is also available, allowing alternative setting of color temperature		
Preset brightness	100cd/m <sup>2</sup> (30ft-L) (when a 1Vp-p 100% white signal is input)		
<b>Input performance</b>			
Inputs	Loop-through BNC (x3)		
RGB	R/B	0.7Vp-p ±6dB, high impedance	
	G	1.0Vp-p ±6dB, sync negative, high impedance	
Analog component	Y	1.0Vp-p ±6dB, high impedance	
	R-Y/B-Y	0.7Vp-p ±6dB, high impedance	
External sync	Loop-through BNC (x1) 0.3 to 8Vp-p negative, high impedance		
Return loss	More than 46dB (7MHz when 75Ω terminated)		
Remote control inputs	Remote 1: Loop-through D-sub 9-pin (for RS-485 serial remote control) Remote 2: D-sub 9-pin		
ISR	D-sub 9-pin		
<b>Video signal performance</b>			
Differential gain	Within 2% for luminance from 0 to 100cd/m <sup>2</sup> (0 to 30ft-L)		
Differential phase	Within 2° for luminance from 0 to 100cd/m <sup>2</sup> (0 to 30ft-L)		
Frequency response	100Hz to 10MHz ±1dB		
DC restoration	Back porch type, back porch level: within 1% of peak luminance, 10 to 90% APL		
<b>Synchronization</b>			
AFC time	Fast mode: 0.5ms Normal mode: 2ms		
Horizontal hold	±500Hz (when AFC 0.5ms)		
Retrace time	Horizontal: Normal; within 1ms, Underscan; within 0.8ms Vertical: within 10μs		
<b>Raster and picture performance</b>			
Normal scan	5% over scan of the effective picture area		
Underscan	3% underscan of the effective picture area		
Stability of raster size	1% of picture height for a 10 to 90% APL change when 100% peak white is set to 100cd/m <sup>2</sup> (30ft-L) brightness		
Linearity	Within 0.5% within circle centered on the screen with a diameter equal to the vertical height, 1% at any other point		
Convergence	Within 0.4mm within circle centered on the screen with a diameter equal to the vertical height, 0.7mm at any other point		
<b>Operating conditions</b>			
Operating temperature range	0 to 40°C (32 to 104°F) Optimum operating range 20 to 30°C (68 to 86°F)		
Humidity	0 to 90% non-condensing		
Altitude	Approx. 3,050m (10,000ft)		

## DIMENSIONS





14-inch (display units)		14-inch (stand-alone monitors)	
BVM-14E1U	BVM-14F1U	BVM-14E5U	BVM-14F5U
525 lines 60 fields or 625 lines 50 fields interlace			
AC 100 to 240V, 50/60Hz			
145W (max.), 1.5 to 1.2A / 0.7 to 0.6A		175W (max.), 1.8 to 1.5A / 0.8 to 0.7A	
346 (W) x 280 (H) x 530 (D)mm (13 5/8 x 11 1/8 x 20 7/8 inches)		482 (W) x 280 (H) x 530 (D)mm (19 x 11 1/8 x 20 7/8 inches)	
23kg (50 lb 11 oz)		26kg (57 lb)	
HR Trinitron CRT with SMPTE-C phosphors AG pitch: 0.22mm, 90° deflection, Ø29.4 in-line gun Center resolution 900TV lines	HR Trinitron CRT with SMPTE-C phosphors AG pitch: 0.25mm, 90° deflection, Ø29.4 in-line gun Center resolution 800TV lines	HR Trinitron CRT with SMPTE-C phosphors AG pitch: 0.22mm, 90° deflection, Ø29.4 in-line gun Center resolution 900TV lines	HR Trinitron CRT with SMPTE-C phosphors AG pitch: 0.25mm, 90° deflection, Ø29.4 in-line gun Center resolution 800TV lines
Diagonal: 332mm (13 1/8 inches) Width: 268mm (10 5/8 inches) Height: 201mm (8 inches)			
PRESET: Factory adjusted for D65 white MANUAL control is also available, allowing alternative setting of color temperature 100cd/m <sup>2</sup> (30ft-L) (when a 1Vp-p 100% white signal is input)			
Loop-through BNC (x3) 0.7Vp-p ±6dB, high impedance 1.0Vp-p ±6dB, sync negative, high impedance 1.0Vp-p ±6dB, high impedance 0.7Vp-p ±6dB, high impedance Loop-through BNC (x1) 0.3 to 8Vp-p negative, high impedance More than 46dB (7MHz when 75Ω terminated) Remote 1: Loop-through D-sub 9-pin (for RS-485 serial remote control) Remote 2: D-sub 9-pin D-sub 9-pin			
Within 2% for luminance from 0 to 100cd/m <sup>2</sup> (0 to 30ft-L) Within 2° for luminance from 0 to 100cd/m <sup>2</sup> (0 to 30ft-L) 100Hz to 10MHz ±1dB Back porch type, back porch level: within 1% of peak luminance, 10 to 90% APL			
Fast mode: 0.5ms Normal mode: 2ms ±500Hz (when AFC 0.5ms) Horizontal: Normal; within 1ms, Underscan; within 0.8ms Vertical: within 10µs			
5% over scan of the effective picture area 3% underscan of the effective picture area 1% of picture height for a 10 to 90% APL change when 100% peak white is set to 100cd/m <sup>2</sup> (30ft-L) brightness Within 0.5% within circle centered on the screen with a diameter equal to the vertical height, 1% at any other point Within 0.3mm within circle centered on the screen with a diameter equal to the vertical height, 0.6mm at any other point			
0 to 40°C (32 to 104°F) Optimum operating range 20 to 30°C (68 to 86°F) 0 to 90% non-condensing Approx. 3,050m (10,000ft)			



Unit: mm (inch)

◆BKM-10R

◆BVM-14E5U ◆BVM-14F5U

\* Features and specifications subject to change without notice.