MEIJI TECHNO

VM Series

VIDEO MICROSCOPES

Meiji Techno's VM Series high resolution video microscopes have been specifically designed for viewing small electronic components, wave-guides, electro-mechanical assemblies, medical devices, seals, fibers, catheters, etc., which require high magnification visual inspection. The **VM Series** video microscopes integrate a CCD video camera, fiber optic Illumination system, and high-resolution "infinity corrected" optics, and are ideal for use in factory automation and machine vision systems.

FEATURES

- Outstanding high-resolution image.
- Choice of objectives from 4X to 100X
- On screen video magnifications from 110.06X to 5,503.3X (Using 1/3" CCD Camera and 13" color monitor).
- Accepts all infinity corrected objectves with RMS thread and 200mm focal length.
- Compact size : 7" x 2" (180mm x 45mm)
- Light weight : 1.38 lb (0.63kg)
- Machine mountable : Four, 4mm x 6mm threaded mounting holes are provided on three faces.
- Coaxial "cool light" illumination with variable intensity light control
- Choice of configurations.
- Optional filter sets available.

BENEFITS

- An ideal system for inspection and alignment on machine vision systems, or in quality control or quality assurance applications.
- Machine mountable for difficult to access areas.
- Can be used with a variety of peripheral equipment : Video micrometers, video printers, VCR's, image archive systems, etc.
- Multiple magnifications with interchangeable objective lenses.
- Flexible configurations for OEM applications.
- Portable, rugged, and ideally suited for remote site inspection.
- Infinity corrected optics.

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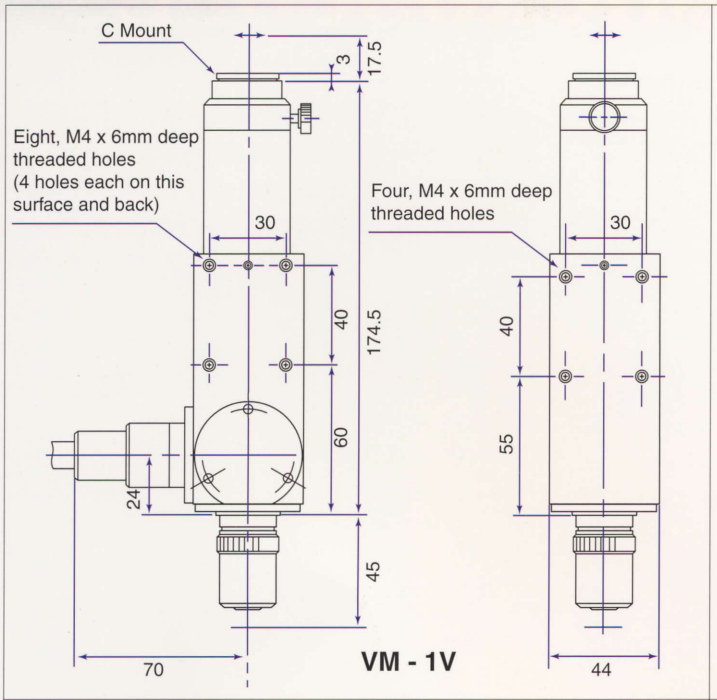
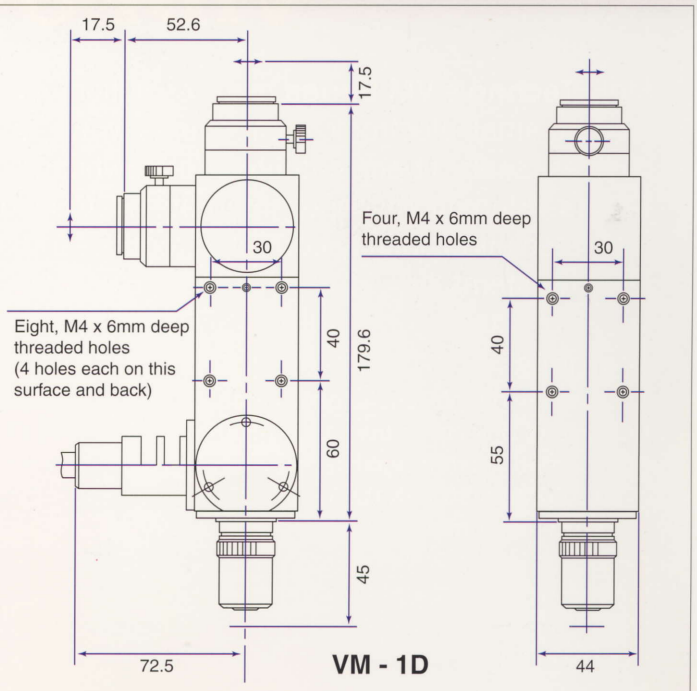
VM Series

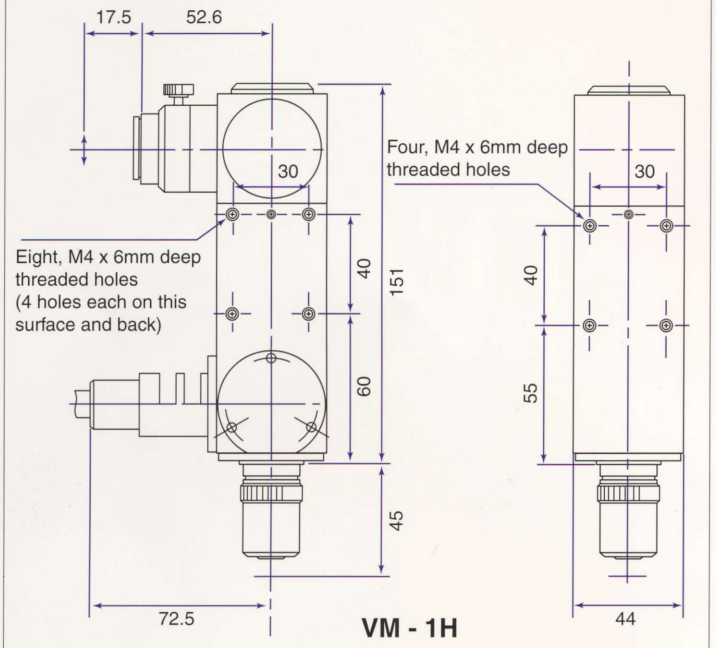
DIMENSIONAL ILLUSTRATIONS



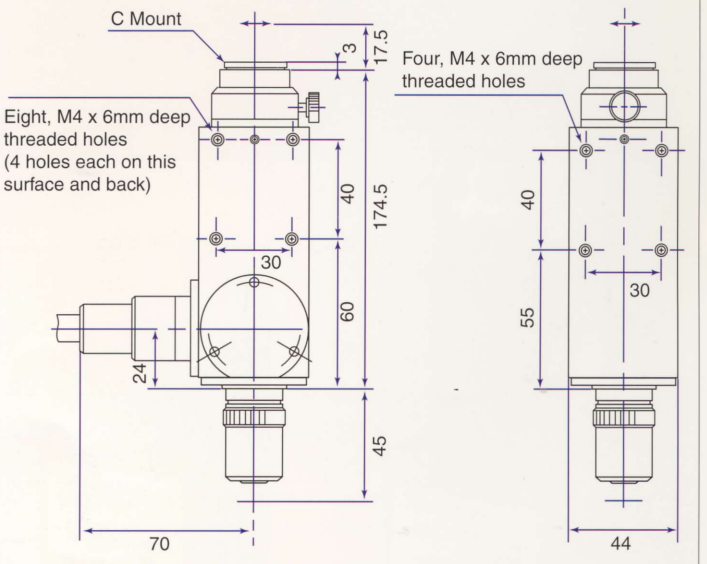
VM - 1V



VM - 1D



VM - 1H



VM - 2V

ORDERING INFORMATION

Model	VM-1V	VM-1H	VM-1D	VM-2V
Video mount	"C" mount			
Orientation of CCD camera	vertical	horizontal	vertical / horizontal	vertical
Magnification of built-in tube lens	1.0X			0.5X

Note: Objective is option.

VM Series

OPTIONAL OBJECTIVES FOR VM SERIES VIDEO MICROSCOPES

OBJECTIVES FOR METALLURGICAL MICROSCOPES, INFINITY OPTICAL SYSTEM

CAT. NO.	DESCRIPTION	N.A.	W.D. inch	W.D. (mm)	RESOLUTION lines pairs/mm	RESOLUTION micron	DEPTH OF FOCUS on CCD Plane (micron)	DEPTH OF FOCUS with10X eyepiece (micron)
MA336	S. Plan M4X	0.10	.618	(15.7)	364	3.36	55.0	140.0
MA330	S. Plan M5X	0.10	.618	(15.7)	364	3.36	55.0	123.0
MA337	S. Plan M10X	0.25	.370	(9.4)	909	1.34	8.8	22.4
MA338	S. Plan M20X	0.40	.204	(5.2)	1455	0.84	3.4	7.7
MA339	S. Plan M40X	0.65	.032	(0.8)	2364	0.52	1.3	2.6
MA344	S. Plan M50X	0.70	.014	(0.36)	2545	0.48	1.1	2.1
MA349	S. Plan LWD M50X	0.50	.236	(6.0)	1818	0.67	2.2	3.6
MA329	S. Plan M60X	0.85	.015	(0.38)	3091	0.39	0.8	1.4
MA328	S. Plan M100X,dry	0.75	.011	(0.27)	2727	0.45	1.0	1.4
MA777	E. Plan M4X	0.10	.618	(15.7)	364	3.36	55.0	140.0
MA778	E. Plan M10X	0.25	.294	(7.48)	909	1.34	8.8	22.4
MA779	E. Plan M20X	0.40	.204	(5.2)	1455	0.84	3.4	7.7
MA780	E. Plan M40X	0.65	.032	(0.8)	2364	0.52	1.3	2.6
MA781	E. Plan M60X	0.85	.015	(0.38)	3091	0.39	0.8	1.4
MA782	E. Plan M100X dry	0.9	.010	(0.25)	3273	0.37	0.7	1.1

MAGNIFICATION CHART (Using 1/3" CCD camera and 13" monitor)

MODEL	Magnification of objective	Field of View on 1/3" CCD (a x b) inch	Field of View on 1/3" CCD (a x b) mm	Magnification on 13" Monitor
		a b	a b	
VM-1V VM-1H VM-1D	4X	.047 x .035	1.2 x 0.9	220.13X
	5X	.038 x .028	0.96 x 0.72	275.15X
	10X	.019 x .014	0.48 x 0.36	550.30X
	20X	.009 x .007	0.24 x 0.18	1,100.66X
	40X	.0047 x .0035	0.12 x 0.09	2,201.32X
	50X	.0038 x .0028	0.096 x 0.072	2,751.65X
	60X	.0031 x .0024	0.08 x 0.06	3,301.98X
	100X	.0019 x .0014	0.048 x 0.036	5,503.30X
VM-2V	4X	.094 x .07	2.4 x 1.8	110.06X
	5X	.076 x .056	1.92 x 1.44	137.58X
	10X	.038 x .028	0.96 x 0.72	275.15X
	20X	.018 x .014	0.48 x 0.36	550.33X
	40X	.094 x .07	0.24 x 0.18	1,100.66X
	50X	.0076 x .0056	0.192 x 0.144	1,375.82X
	60X	.0062 x .0048	0.16 x 0.12	1,650.99X
	100X	.0038 x .0028	0.096 x 0.072	2,751.65X

MAGNIFICATION CHART (Using 1/2" CCD camera and 13" monitor)

MODEL	Magnification of objective	Field of View on 1/2" CCD (a x b) inch	Field of View on 1/2" CCD (a x b) mm	Magnification on 13" Monitor
		a b	a b	
VM-1V VM-1H VM-1D	4X	.0629 x .0472	1.6 x 1.2	165.1X
	5X	.0503 x .0377	1.28 x 0.96	206.37X
	10X	.0251 x .0188	0.64 x 0.48	412.75X
	20X	.0125 x .0094	0.32 x 0.24	825.5X
	40X	.0062 x .0047	0.16 x 0.12	1,651.0X
	50X	.0050 x .0037	0.128 x 0.096	2,063.75X
	60X	.0041 x .0031	0.106 x 0.08	2,476.5X
	100X	.0025 x .0018	0.064 x 0.048	4,127.5X
VM-2V	4X	.1258 x .0944	3.2 x 2.4	82.55X
	5X	.1006 x .0754	2.56 x 1.92	103.18X
	10X	.0502 x .0376	1.28 x 0.96	206.37X
	20X	.025 x .0188	0.64 x 0.48	412.75X
	40X	.0124 x .0094	0.32 x 0.24	825.5X
	50X	.010 x .0074	0.256 x 0.192	1,031.87X
	60X	.0082 x .0062	0.212 x 0.16	1,238.25X
	100X	.005 x .0036	0.128 x 0.096	2,063.75X

VIDEO MICROSCOPES

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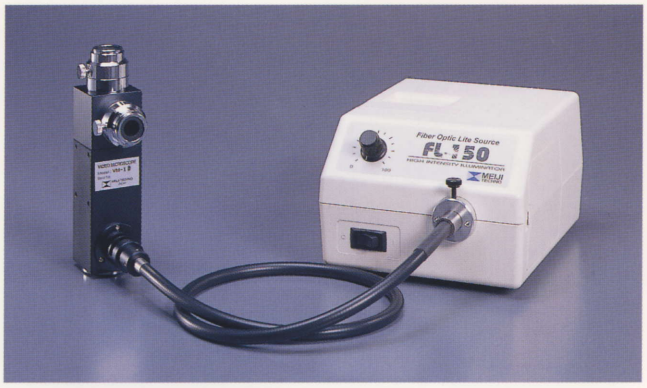
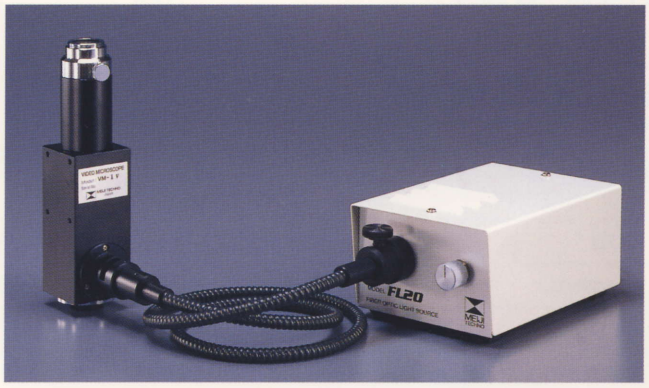
ILLUMINATORS FOR VM SERIES VIDEO MICROSCOPES

FL150/115	Light source for 115V, 50/60Hz operation, halogen lamp, 21V 150W with light-intensity regulation, maximum color temperature 3,200° K with AC fan
FL150/200	Light source for 230V, 50/60Hz operation, halogen lamp, 21V 150W with light-intensity regulation, maximum color temperature 3,200° K with AC fan
FL150/95	Single arm light guide, 0.18" (4.75mm) diameter fiber bundle, 36" (915mm) long for use with FL150/115 or FL150/200
FL180/70	Spare bulb, 21V 150W halogen, for FL150/115 and FL150/200
FL20/115	Light source for 115V, 50/60Hz operation, halogen lamp, 12V 20W with light-intensity regulation
FL20/200	Light source for 230V, 50 / 60Hz operation, halogen lamp, 12V 20W with light-intensity regulation
FL20/05	Flexible single arm light quide, 0.157" (4mm) diameter fiber bundle, 39.37" (1000mm) long for use with FL20 (needs FL20/15 adapter to connect to VM microscope)
FL20/15	Adapter to connect FL20/05 Flexible single arm light quide to VM microscope
FL20/10	Spare bulb, 12V 20W halogen, for FL20/115 and FL20 / 200

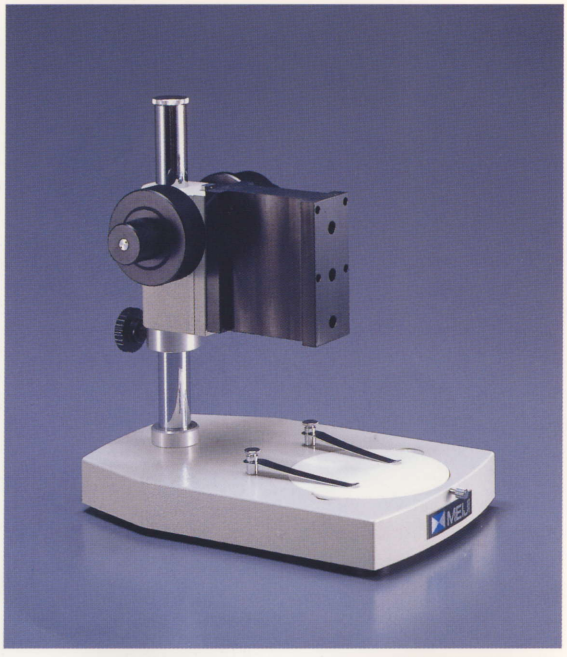


VM-1D with FL150 and FL150/95



VM-1V with FL20, FL20/05 and FL20/15

VM-PC STAND FOR VM SERIES VIDEO MICROSCOPES



VM-PC STAND

VM-PC STAND

Pole type stand with coaxial coarse and fine focusing block mounted on a plain base. Rack and pinion mount allows smooth, precise focusing over 33mm of travel.
138mm distance from optical center to center of mounting post. Four M4 x 6mm deep holes are provided for mounting VM microscope. Supplied with one 94.5mm diameter reversible black and white stage plate and two stage clips.

Length : 230mm
Width : 150mm
Height : 248mm
Pillar Diameter : 20mm

VIDEO MICROSCOPES

MEIJI TECHNO

COLOR VIDEO CAMERAS

The MEIJI CK3100 (1/3" CCD) and CK3900 (1/2" CCD) COLOR TV CAMERAS are high-resolution, single chip cameras that offer high-priced features at affordable prices. Compact and lightweight, the cameras are ideal for use with microscopes.

FEATURES

- 450TV lines of horizontal resolution
- CCD sensor 768H x 494V NTSC, 752H x 582V PAL
- Electronic CCD-Iris for auto light control
- Electronic shutter speed up to 1/10,000sec.
- TTL auto tracking white balance (ATW) or preset
- C and CS mountable
- CE Approved

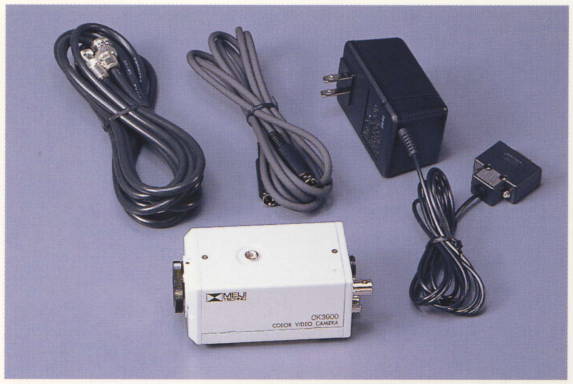
Comprises:

Color TV camera 1pc
AC Adapter.....1pc
BNC Cable, 3M long 1pc
S Cable, 3M long.....1pc

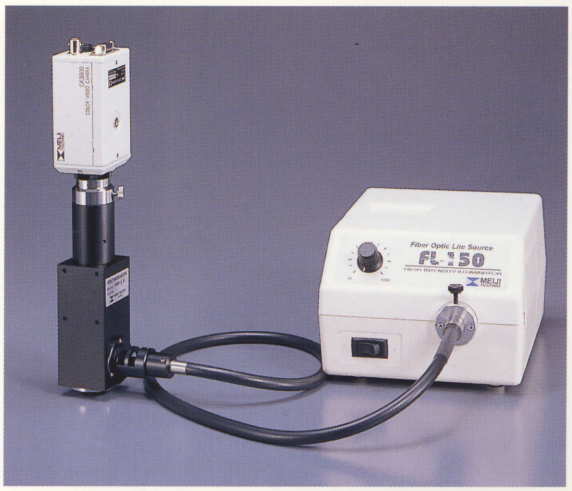
CK3900

SPECIFICATIONS

Model	CK3100N	CK3100P	CK3900N	CK3900P
	High resolution			
CCD	1/3" Interline-Transfer type		1/2" Interline-Transfer type	
Elements	768 (H) x 494 (V)	752 (H) x 582 (V)	768 (H) x 494 (V)	752 (H) x 582 (V)
TV system	NTSC	PAL	NTSC	PAL
Lens mount	C/CS-Mount			
White balance	3200° K / 4600° K / 5600° K / ATW			
AGC	O dB ~18 dB			
Shutter	1/60 (1/50) ~ 1/10,000			
Serial interface	RS232C			
Power	12V DC ±10%			
H.resolution	450 TV Lines			
S/N	50 dB			
Video output	VBS (y=0.45)			
Min.Sensity (AGC ON)	0.3 lux on CCD surface			
External sync	HD/VD, Composite Sync			
Power consumption	4.5W			
Storage temperature	–25° C ~ 60° C			
Operating temperature	–5° C ~ 45° C			
Dimensions	55 (W) x 45 (H) x 110 (L) mm			
Net Weight	350g (TV Camera)			



CK3900, AC Adapter and Cables



VM-1V with CK3900, FL150 and FL150/95

New York Microscope Company
Microscope Experts since 1979
100 Lauman Lane, Suite A, Hicksville, NY 11801
Tel: (877) 877-7274 | Fax: (516) 801-2046
Email: Info@nyscopes.com
www.microscopeinternational.com