



# Pick-up Tube, the heart of TV Camera

- Performance of a TV camera is dependent on the quality of pick-up tube, where all the electrical signals originate.
- Pick out one of Matsushita tubes, you will surely be satisfied with their quality and performance as they are produced in quantities in internationally renowned production facilities.
- Matsushita offers you a wide product range.  
You can always find a tube that well meets your application requirements.

## The product line covers:

- 1) High quality/performance Vidicon for general application.
- 2) Color camera Vidicon with built-in color filter.
- 3) Silicon Vidicon having high infrared sensitivity and low lag characteristics
- 4) High sensitivity/resolution "Newvicon<sup>®</sup>", a Matsushita's proprietary product featuring a high sensitivity 20 times as high as conventional Vidicon.

	Type No.	Application	Feature	Heater current (mA)	Tube diameter (inch)	Max length (mm)	Focusing method (Note 1)	Deflection method (Note 2)	Mesh	Typical Characteristics					Replacement Guide
										Sensitivity		Gamma	Lag (Note 4) (%)	Limiting resolution at center (TV lines)	
										Face plate illumination (Note 3) (lx)	Signal current (nA)				
Vidicon	20PE11	Home use TV camera	Compact, Light-weight	110	2/3	108	M	M	Integral	10	200	0.74	20	500	
	20PE13A	Compact TV camera	Compact, High-resolution	95	2/3	108	M	M	Separate	10	220	0.74	20	700	8823, 8844
	20PE14	Mini-type TV camera Handheld VTR camera	Compact, Light-weight	95	2/3	108	E	M	Separate	10	220	0.74	20	600	8929
	S4097	Mini-type TV camera Handheld VTR camera	Compact, Light-weight	95	2/3	108	E	M	Separate	10	220	0.74	20	600	20PE19, 20PE20
	7262A	Standard TV camera	Standard	95	1	133	M	M	Integral	10	300	0.74	25	600	
	7735A	Standard TV camera	Standard	600	1	162	M	M	Integral	10	300	0.74	25	600	
	8507	High-resolution TV camera "Tele-cine" camera	High-resolution	600	1	162	M	M	Separate	10	300	0.74	25	800	
	8541	High-resolution TV camera "Tele-cine" camera	High-resolution	95	1	162	M	M	Separate	10	300	0.74	25	800	
Color Vidicon	S4071	2-tube color camera (chroma ch. & luminance ch.)	Built-in optical black, High sensitivity	95	2/3	108	M	M	Separate	10	250	0.74	15	700	
	S4072	2-tube color camera (chroma ch.)	Built-in yellow stripe filter	95	2/3	108	E	M	Separate	10	150	0.74	18	—	
	S4090	2-tube color camera (chroma ch. & luminance ch.)	Built-in optical black	95	2/3	119	E	M	Separate	10	240	0.74	18	650	
	S4091	2-tube color camera (chroma ch.)	Built-in optical black, yellow stripe filter	95	2/3	119	E	M	Separate	10	160	0.74	18	—	
	S4070	Single-tube color camera	Built-in stripe filter (index, R.G.B.)	95	1	162	C	M	Separate	10	200	0.74	30	—	
	S4077	Single-tube color camera	Built-in stripe filter	95	1	162	C	M	Separate	10	280	0.74	25	—	
Newvicon <sup>®</sup>	S4075	Ultra-sensitivity compact TV camera	Ultra-sensitivity in visible spectrum No burning-in	95	2/3	108	M	M	Separate	1	260	1	10	700	
	S4092	Ultra-sensitivity compact TV camera	Ultra-sensitivity in visible spectrum No burning-in	95	2/3	108	E	M	Separate	1	260	1	12	600	
	S4076	Ultra-sensitivity TV camera X-ray TV camera	Ultra-sensitivity in visible spectrum, High resolution, No burning-in	95	1	162	M	M	Separate	1	460	1	20	800	
Silicon Vidicon	20PE15	High infra-red sensitivity compact TV camera	Ultra-sensitivity, Low lag, No burning-in	95	2/3	108	M	M	Separate	1	300	1	5	400	
	25PE14	High infra-red sensitivity TV camera	Ultra-sensitivity, Low lag, No burning-in	95	1	133	M	M	Separate	1	550	1	10	550	

Note 1. M : Magnetic focusing  
E : Electrostatic focusing  
C : Combined focusing

Note 2. M : Magnetic deflection

Note 3. 2856° K Tungsten

Note 4. Lag at 50 m sec. after light-off

# Application Examples

(⊙ : Most suitable)

Application	NEWVICON <sup>®</sup>	VIDICON	SILICON VIDICON	PLUMBICON <sup>®</sup>
Color TV Camera Broadcasting Sub-broadcasting Industrial & CCTV "Tele-cine" camera	○	⊙ ⊙		⊙ ⊙ ⊙ ⊙
Medical TV Camera X-ray camera Endoscope camera	⊙ ○	○ ○		⊙ ○
Educational TV Camera Educational CCTV System camera for education & training Teaching aids	○ ○ ⊙	⊙ ⊙ ⊙		○ ○
Surveillance Camera Infra-red noctovision LLL (low light level) TV Factory surveillance: hazardous operation, etc. Outdoor surveillance: station, car parking, etc. Indoor surveillance: supermarket, etc.	○ ⊙ ⊙ ⊙ ⊙	○ ○ ⊙	⊙ ○ ○ ○	
Home Entertainment Video instructor for sports, etc. "Video Receptionist"	⊙ ⊙	⊙ ⊙		
Others Microscope camera Rear-view camera (bus, fork lift, etc.)	⊙ ⊙	○ ⊙	○	

(N.B. Plumbicon is marketed only in Japan)

## Typical Application of Matsushita Pick-up Tubes

- Sophisticated color camera ..... Plumbicon<sup>®</sup>
- High-sensitivity surveillance camera ..... Newvicon<sup>®</sup>
- Infra-red sensitive surveillance camera ..... Silicon Vidicon
- General surveillance, inexpensive camera ..... Vidicon
- Scan-converter, video editing ..... Silicon Storage Tube

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