

Fixed Magnification Telecentric Lens

MML-ST Series

Through combination with 410 thousand pixel or greater cameras, the renewed design of the MML-ST Series realizes high level optical performance. These compact models with a diameter of 16mm feature a long depth of field making them ideal for installation in manufacturing equipment.

- Compact design with a lens barrel diameter from $\varnothing 16$
- Long Depth of Field
- Number of pixels: 410 thousand or higher
- Camera Size: 1/2" or less in most cases



WD40mm

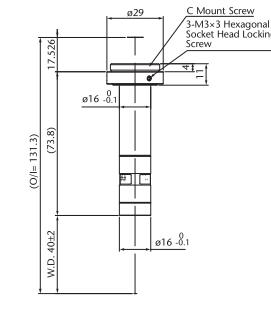
Model	Magnification	O/I	WD	Resolution	Depth of Field	NA	Effective F No	TV Distortion	Largest Compatible Camera	Weight
MML1-ST40D	×1	105mm	40mm	7.2 μ m	0.88mm	0.046	11	-0.02% or less	1/2"	31g
MML1.5-ST40D	×1.5	105.1mm	40.1mm	5.6 μ m	0.44mm	0.06	12.5	0.02% or less	1/2"	31g
MML2-ST40D	×2	96.1mm	40.1mm	4.8 μ m	0.29mm	0.07	14.3	0.01% or less	1/2"	34g
★ MML3-ST40D	×3	106.9mm	37.9mm	4.8 μ m	0.19mm	0.07	21.3	-0.05% or less	1/2"	33g
MML4-ST40D	×4	103.9mm	40.9mm	4.8 μ m	0.14mm	0.07	28.5	0.01% or less	1/2"	36g
MML6-ST40D	×6	117.5mm	40.3mm	4.8 μ m	0.1mm	0.07	42.8	-0.02% or less	1/2"	39g
MML8-ST40D	×8	131.3mm	40mm	4.8 μ m	0.07mm	0.07	57	-0.02% or less	1/2"	42g
MML1-ST40	×1	105mm	40mm	7.2 μ m	0.88mm	0.046	11	-0.02% or less	1/2"	26g
MML1.5-ST40	×1.5	105.1mm	40.1mm	5.6 μ m	0.44mm	0.06	12.5	0.02% or less	1/2"	26g
MML2-ST40	×2	96.1mm	40.1mm	4.8 μ m	0.29mm	0.07	14.3	0.01% or less	1/2"	29g
★ MML3-ST40	×3	106.9mm	37.9mm	4.8 μ m	0.19mm	0.07	21.3	-0.05% or less	1/2"	28g
MML4-ST40	×4	103.9mm	40.9mm	4.8 μ m	0.14mm	0.07	28.5	0.01% or less	1/2"	31g
MML6-ST40	×6	117.5mm	40.3mm	4.8 μ m	0.1mm	0.07	42.8	-0.02% or less	1/2"	35g
★ MML8-ST40	×8	131.3mm	40mm	4.8 μ m	0.07mm	0.07	57	-0.02% or less	1/2"	37g

*Depth of field is calculated assuming a horizontal 240TV resolution using a 1/2" CCD camera. (Permissible circle of confusion on the image-formation side: 40 μ m)

*Resolution values indicate the theoretical resolution at a wavelength of 550nm.

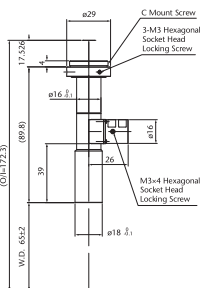
Caution: The WD 40mm series cannot be used with all prism adapter options.

★ Made-to-order products.

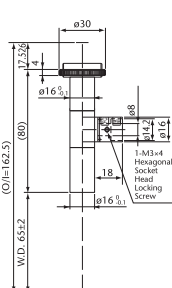


WD65mm

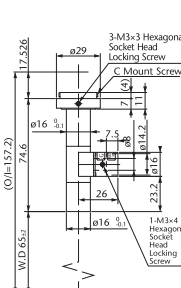
MML08-ST65D



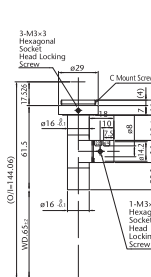
MML1-ST65D



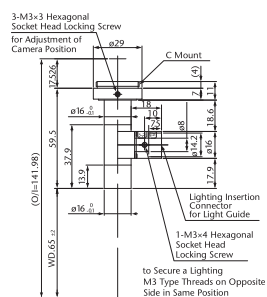
MML1.5-ST65D



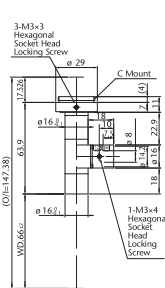
MML2-ST65DS



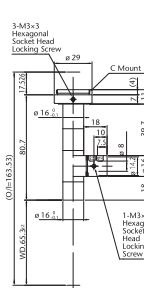
MML3-ST65DS



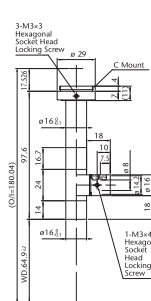
MML4-ST65DS



MML6-ST65DS



MML8-ST65DS

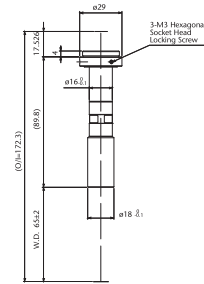


Model	Magnification	O/I	WD	Resolution	Depth of Field	NA	Effective FNo	TV Distortion	Largest Compatible Camera	Weight
MML08-ST65D	×0.8	172.3mm	65mm	12.4μm	1.9mm	0.027	14.9	0.01% or less	1/2"	49g
MML1-ST65D	×1	162.5mm	65mm	12.5μm	1.49mm	0.027	18.6	0.01% or less	1/2"	44g
MML1.5-ST65D	×1.5	157.2mm	65mm	7μm	0.56mm	0.048	15.5	-0.04% or less	1/2"	43g
MML2-ST65DS	×2	144.1mm	65mm	5.6μm	0.35mm	0.057	17.3	0.01% or less	1/2"	37g
MML3-ST65DS	×3	142mm	65mm	4.7μm	0.19mm	0.07	21.9	0.01% or less	1/2"	35g
MML4-ST65DS	×4	147.4mm	66mm	4.4μm	0.13mm	0.076	25.9	0.02% or less	1/2"	41g
MML6-ST65DS	×6	163.5mm	65.3mm	4.4μm	0.09mm	0.076	39.3	0.01% or less	1/2"	43g
MML8-ST65DS	×8	180mm	64.9mm	4.4μm	0.07mm	0.076	52.3	-0.01% or less	1/2"	46g

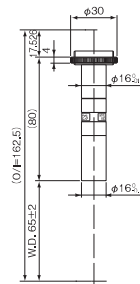
* Depth of field is calculated assuming a horizontal 240TV resolution using a 1/2" CCD camera. (Permissible circle of confusion on the image-formation side: 40μm)

* Resolution values indicate the theoretical resolution at a wavelength of 550nm.

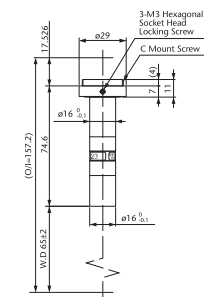
MML08-ST65



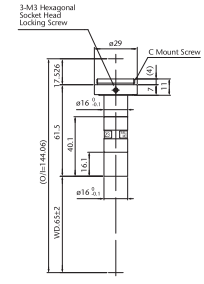
MML1-ST65



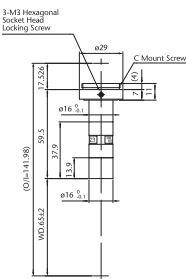
MML1.5-ST65



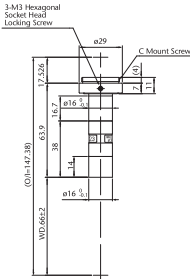
MML2-ST65S



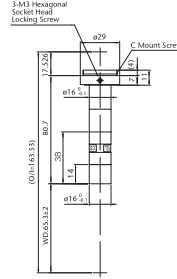
MML3-ST65S



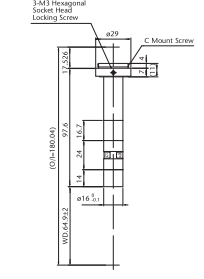
MML4-ST65S



MML6-ST65S



MML8-ST65S

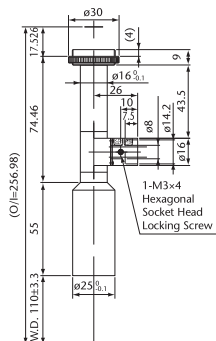


Model	Magnification	O/I	WD	Resolution	Depth of Field	NA	Effective FNo	TV Distortion	Largest Compatible Camera	Weight
MML08-ST65	×0.8	172.3mm	65mm	12.4μm	1.9mm	0.027	14.9	0.01% or less	1/2"	44g
MML1-ST65	×1	162.5mm	65mm	12.5μm	1.49mm	0.027	18.6	0.01% or less	1/2"	38g
MML1.5-ST65	×1.5	157.2mm	65mm	7μm	0.56mm	0.048	15.5	-0.04% or less	1/2"	36g
MML2-ST65S	×2	144.1mm	65mm	5.6μm	0.35mm	0.057	17.3	0.01% or less	1/2"	32g
MML3-ST65S	×3	142mm	65mm	4.7μm	0.19mm	0.07	21.9	0.01% or less	1/2"	30g
MML4-ST65S	×4	147.4mm	66mm	4.4μm	0.13mm	0.076	25.9	0.02% or less	1/2"	36g
MML6-ST65S	×6	163.5mm	65.3mm	4.4μm	0.09mm	0.076	39.3	0.01% or less	1/2"	38g
MML8-ST65S	×8	180mm	64.9mm	4.4μm	0.07mm	0.076	52.3	-0.01% or less	1/2"	42g

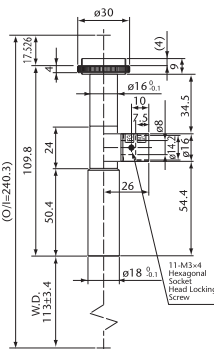
* Depth of field is calculated assuming a horizontal 240TV resolution using a 1/2" CCD camera. (Permissible circle of confusion on the image-formation side: 40μm)
* Resolution values indicate the theoretical resolution at a wavelength of 550nm.

WD110mm

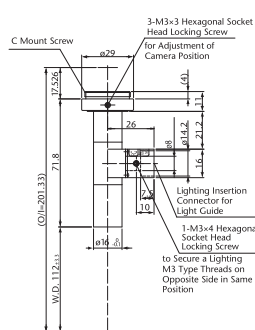
MML08-ST110D



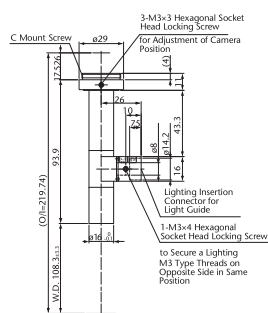
MML1-ST110D



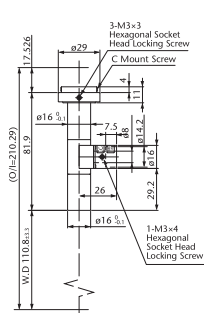
MML2-ST110DS



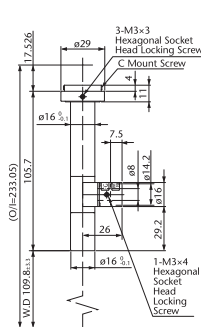
MML3-ST110DS



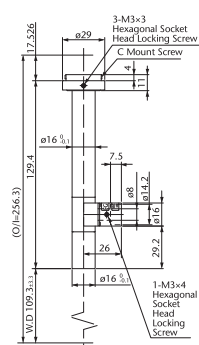
MML4-ST110D



MML6-ST110D

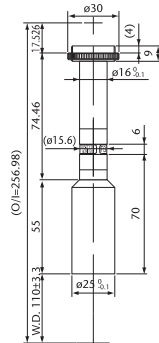


MML8-ST110D

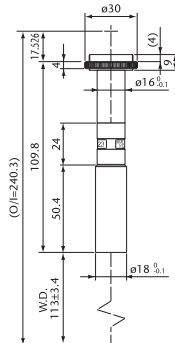


Model	Magnification	O/I	WD	Resolution	Depth of Field	NA	Effective FNo	TV Distortion	Largest Compatible Camera	Weight
MML08-ST110D	×0.8	257mm	110mm	13.5μm	2mm	0.024	16.1	0.01% or less	1/2"	85g
MML1-ST110D	×1	240.3mm	113mm	14μm	1.67mm	0.024	20.9	0.05% or less	1/2"	58g
MML2-ST110DS	×2	201.3mm	112mm	11.2μm	0.66mm	0.03	33.2	0.01% or less	1/2"	39g
MML3-ST110DS	×3	219.7mm	108.3mm	11.2μm	0.44mm	0.03	49.7	0.01% or less	1/2"	43g
MML4-ST110D	×4	210.3mm	110.8mm	7.5μm	0.22mm	0.045	44.4	0.03% or less	1/2"	43g
MML6-ST110D	×6	233.1mm	109.8mm	7.5μm	0.17mm	0.045	66.4	-0.01% or less	1/2"	48g
MML8-ST110D	×8	256.3mm	109.3mm	7.5μm	0.17mm	0.045	88.4	-0.01% or less	1/2"	54g

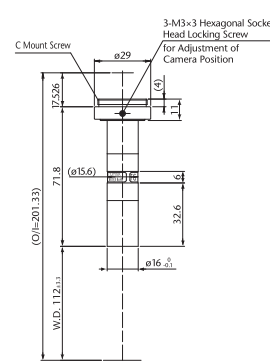
MML08-ST110



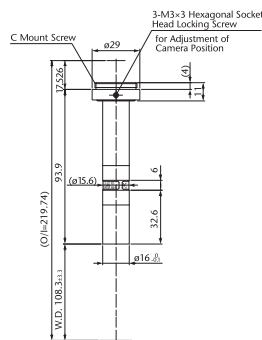
MML1-ST110



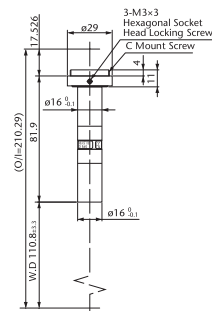
MML2-ST110S



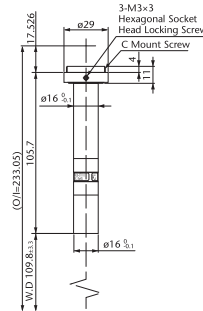
MML3-ST110S



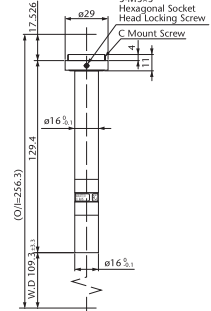
MML4-ST110



MML6-ST110



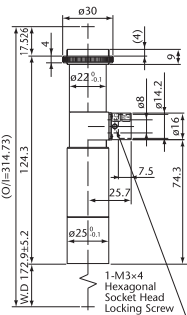
MML8-ST110



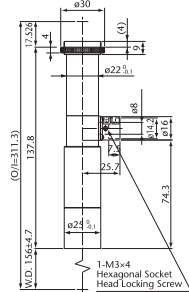
Model	Magnification	O/I	WD	Resolution	Depth of Field	NA	Effective F No	TV Distortion	Largest Compatible Camera	Weight
MML08-ST110	×0.8	257mm	110mm	13.5μm	2mm	0.024	16.1	0.01% or less	1/2"	79g
MML1-ST110	×1	240.3mm	113mm	14μm	1.67mm	0.024	20.9	0.05% or less	1/2"	50g
MML2-ST110S	×2	201.3mm	112mm	11.2μm	0.66mm	0.03	33.2	0.01% or less	1/2"	34g
MML3-ST110S	×3	219.7mm	108.3mm	11.2μm	0.44mm	0.03	49.7	0.01% or less	1/2"	37g
MML4-ST110	×4	210.3mm	110.8mm	7.5μm	0.22mm	0.045	44.4	0.03% or less	1/2"	38g
MML6-ST110	×6	233.1mm	109.8mm	7.5μm	0.17mm	0.045	66.4	-0.01% or less	1/2"	43g
MML8-ST110	×8	256.3mm	109.3mm	7.5μm	0.17mm	0.045	88.4	-0.01% or less	1/2"	49g

WD150mm

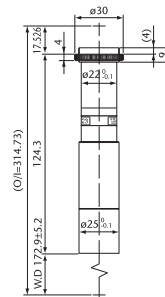
MML08-ST170D



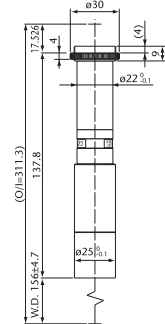
MML1-ST150D



MML08-ST170



MML1-ST150



Model	Magnification	O/I	WD	Resolution	Depth of Field	NA	Effective F No	TV Distortion	Largest Compatible Camera	Weight
MML08-ST170D	×0.8	314.7mm	172.9mm	12μm	1.8mm	0.028	14	0.03% or less	1/2"	80g
MML1-ST150D	×1	311.3mm	156mm	8.8μm	1.1mm	0.038	13	0.03% or less	1/2"	90g
MML08-ST170	×0.8	314.7mm	172.9mm	12μm	1.8mm	0.028	14	0.03% or less	1/2"	76g
MML1-ST150	×1	311.3mm	156mm	8.8μm	1.1mm	0.038	13	0.03% or less	1/2"	84g

* Resolution values indicate the theoretical resolution at a wavelength of 550nm.

* Depth of field is calculated assuming a horizontal 240TV resolution using a 1/2" CCD camera. (Permissible circle of confusion on the image-formation side: 40μm)

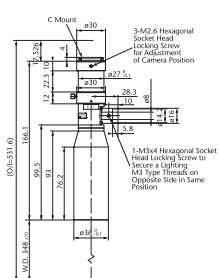
WD300mm

Lenses with a very long working distance of 300mm are available with optical magnifications of 0.5 $\times$, 1 $\times$ for long stand-off applications. Improved flexibility and ease-of-use is achieved with variable iris control.

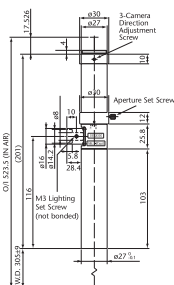
- **Magnifications: 0.5 $\times$, 1 $\times$**
- **WD=300 mm**
- **With variable iris of 11.4-32**



MML05-ST300DVI



MML1-ST300D



Model	Magnification	O/I	WD	Resolution	Depth of Field	NA	Effective FNo	TV Distortion	Largest Compatible Camera	Weight
MML05-ST300DVI	$\times 0.5$	531.6mm	348mm	15.3 μm ~ 37.3 μm	3.6mm ~ 8.9mm	0.022 ~ 0.009	11.4 ~ 27.8	0.06% or less	1/2"	200g
MML1-ST300D	$\times 1$	523.5mm	305mm	15 μm ~ 27 μm	1.8mm ~ 2.6mm	0.022 ~ 0.016	22.7 ~ 32	0.05% or less	1/2"	150g

* Resolution values indicate the theoretical resolution at a wavelength of 550nm.

* Depth of field is calculated assuming a horizontal 240TV resolution using a 1/2" CCD camera. (Permissible circle of confusion on the image-formation side: 40 μm)