

**Macro**

# VS-LDA **Distortionless** SERIES

Precision without distortion



Compact High Contrast Distortionless Macro Lenses



**VS TECHNOLOGY**  
MACHINE VISION OPTICS

## Compact high contrast macro lenses ideal for machine vision applications



### Features

The VS-LDA series generates a low distortion image, even when using extension tubes, by using a large number of lens shifts. Its design allows for the support of a wide range of magnification, WD, and DOF.


Compared to a conventional fixed focal length lens, the image generated by a VS-LDA lens is not distorted even towards the edges of the lens.

Model	Focal Length	Magnification	Working F/#
VS-LDA4	4	(∞) 0.01x - 0.04x	2.1
VS-LDA6.5	6.5	(∞) 0.01x - 0.6x	2.3
VS-LDA10	10	(∞) 0.03x - 0.1x	2.3 - 2.4
VS-LDA15	15	(∞) 0.03x - 0.15x	2.1 - 2.2
VS-LDA20	20	0.04x - 0.22x	2.1 - 2.3
VS-LDA25	25	0.05x - 0.25x	2.1 - 2.6
VS-LDA30	30	0.08x - 0.23x	2.4 - 2.8
VS-LDA35	35	0.30x - 0.50x	2.5 - 2.9
VS-LDA50	50	0.10x - 0.25x	2.7 - 3.1
VS-LDA75	75	0.15x - 0.35x	4.1 - 4.5



### Application

Having low distortion and good contrast is especially useful for measurement applications or applications that require a clear image from the entire available FOV. In the below example, the distortion and low contrast in conventional lenses makes it difficult to read QR codes that are far from the lens center while the VS-LDA series performs well throughout the entire FOV. If you have a QR Reader you can test it for yourself!

 **Try it!**

**Conventional CCTV Lens**

**VS-LDA20 Lens**