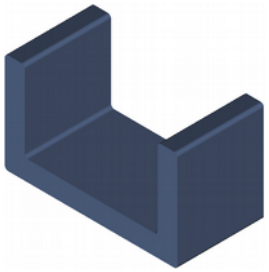
Laminated U-Shield

Ni-Fe or Si-Fe Soft Ferromagnetic Shield



Description

The laminated U-shield is a soft ferromagnetic shield featuring superior material characteristics such as high linearity and very low hysteresis. It is available with two different materials: Ni-Fe and Si-Fe.

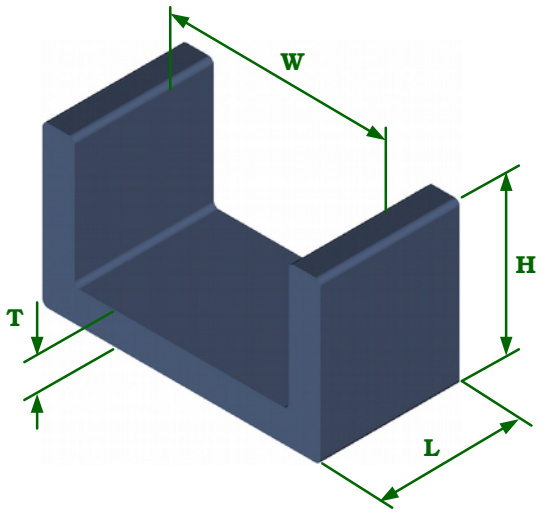
The shield is designed for planar current sensing in combination with a magnetic field sensor, i.e., Hall sensor, AMR sensor and a busbar conductor. The LU-shield protects the sensor from parasitic magnetic fields caused by nearby conductors or other magnetic field sources while at the same time it enhances sensitivity and signal-to-offset ratio of the sensor. Thanks to its laminated design it is suitable for high-speed applications.

Magnetic Characteristics

Parameter	Material	Typical Value	Unit
Relative Permeability	Ni-Fe Si-Fe	100'000 40'000	a.u.
Initial Relative Permeability	Ni-Fe Si-Fe	7000 2500	a.u.
Saturation Flux Density	Ni-Fe Si-Fe	1 1.5	T
Hysteresis	Ni-Fe Si-Fe	2.8 n/a	A/m
Curie Temperature	Ni-Fe Si-Fe	450 700	°C

Geometry LU-shield-W-L-H-T

W: Width
L: Length
H: Height
T: Thickness



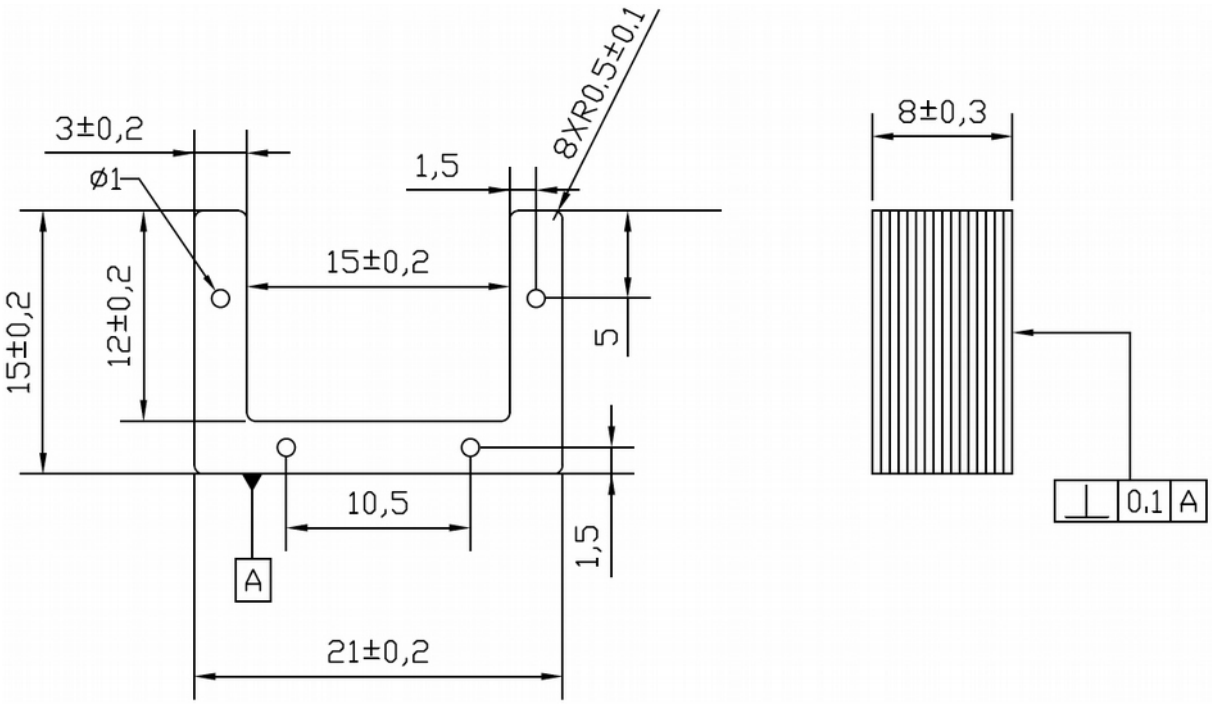
Material Specification	Laminations	Ni or Si content
Laminations and Nickel content	0.5mm	48% (Ni)
Laminations and Silicon content	0.5mm	<3.5% (Si)

Available Standard Geometries*

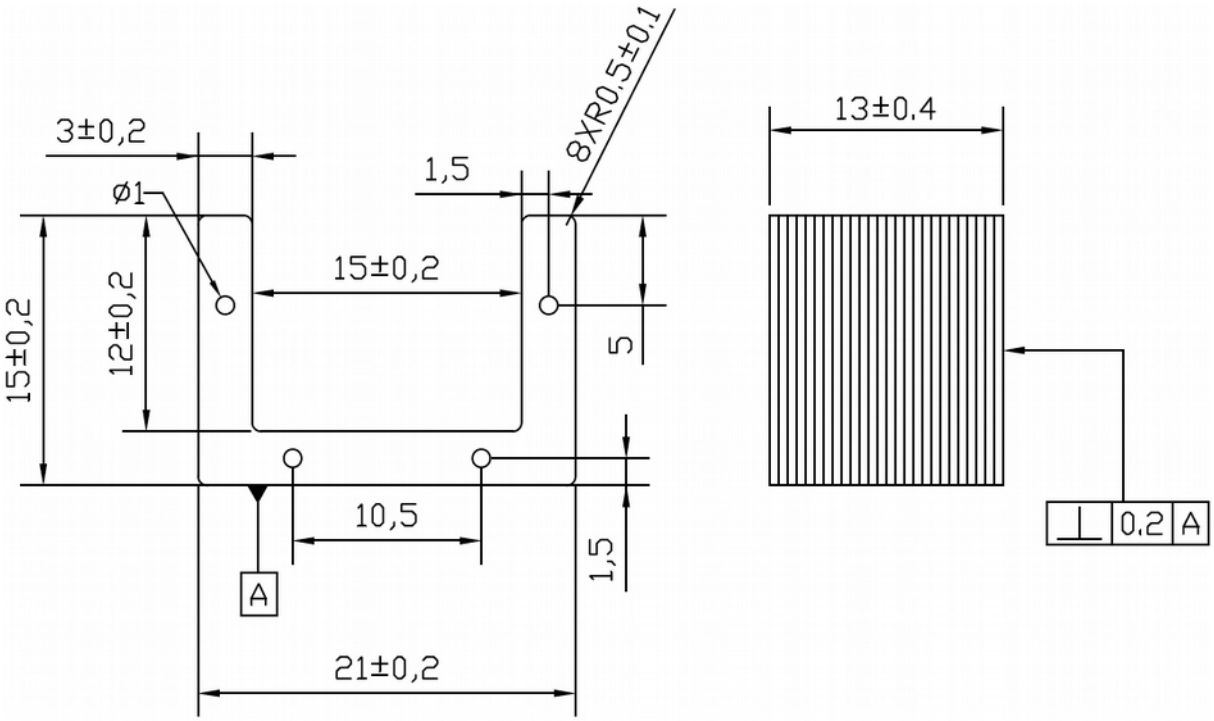
Order code	W	L	H	T	Type[2]
LU15-8-15-3-NiFe	15	8	15	3	Ni-Fe
LU15-8-15-3-SiFe	15	8	15	3	Si-Fe
LU15-13-15-3-NiFe	15	13	15	3	Ni-Fe
LU15-13-15-3-SiFe	15	13	15	3	Si-Fe
LU20-8-15-3-NiFe	20	8	15	3	Ni-Fe
LU20-8-15-3-SiFe	20	8	15	3	Si-Fe
LU20-13-15-3-NiFe	20	13	15	3	Ni-Fe
LU20-13-15-3-SiFe	20	13	15	3	Si-Fe
LU25-8-18-3-NiFe	25	8	18	3	Ni-Fe
LU25-8-18-3-SiFe	25	8	18	3	Si-Fe
LU25-13-18-3-NiFe	25	13	18	3	Ni-Fe
LU25-13-18-3-SiFe	25	13	18	3	Si-Fe

*other geometries on request
[2]all shield models are available with Ni-Fe or Si-Fe material

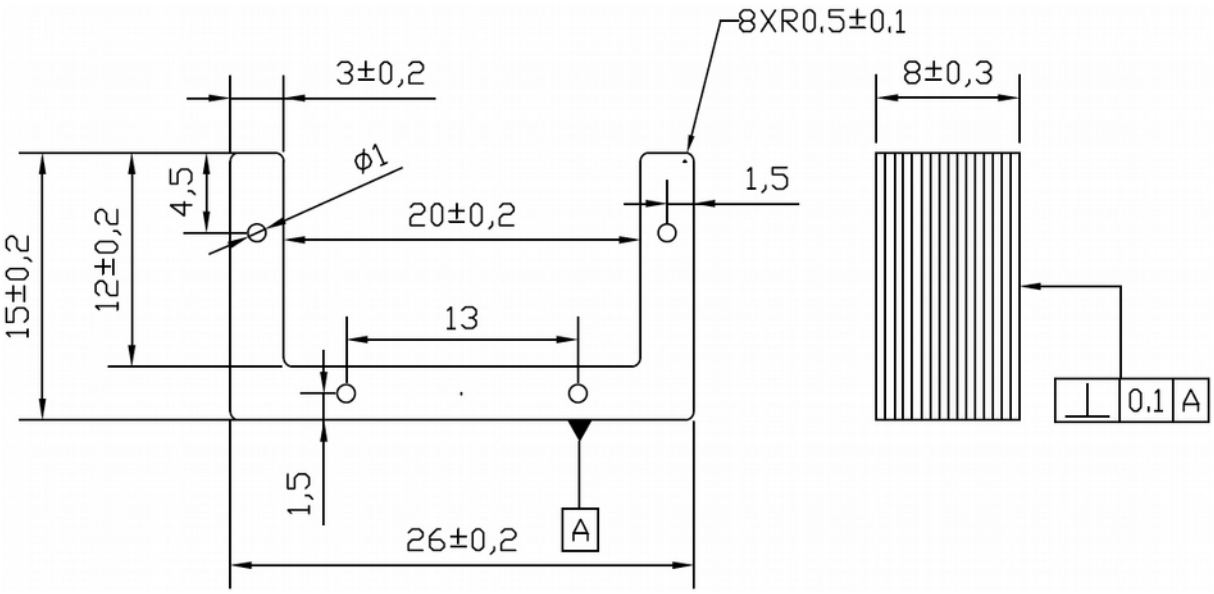
Geometry LU15-8-15-3



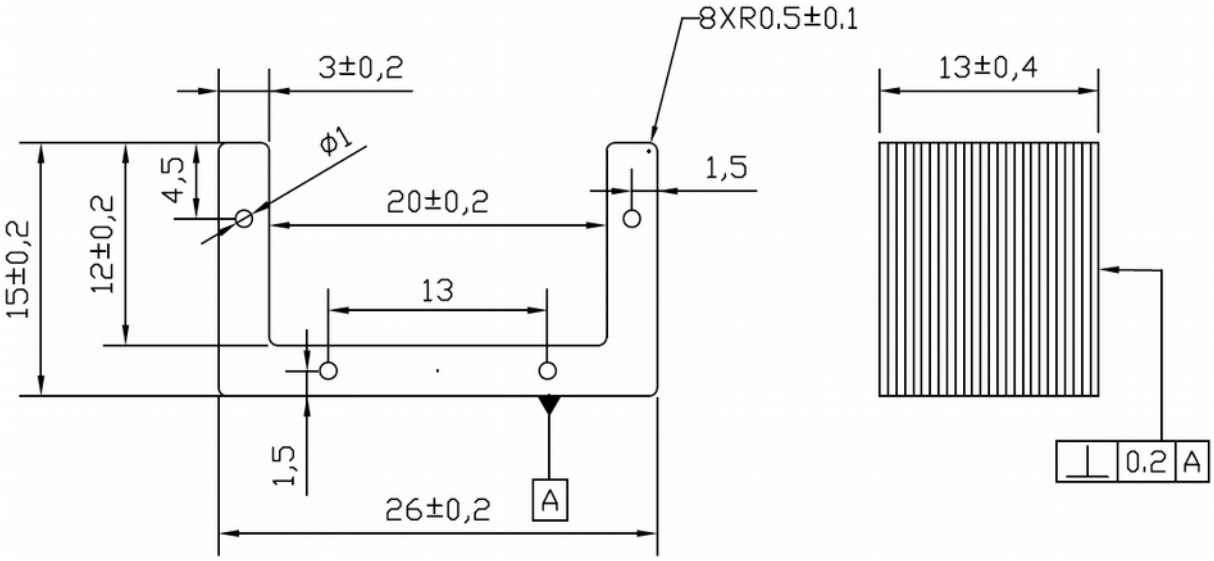
Geometry LU15-13-15-3



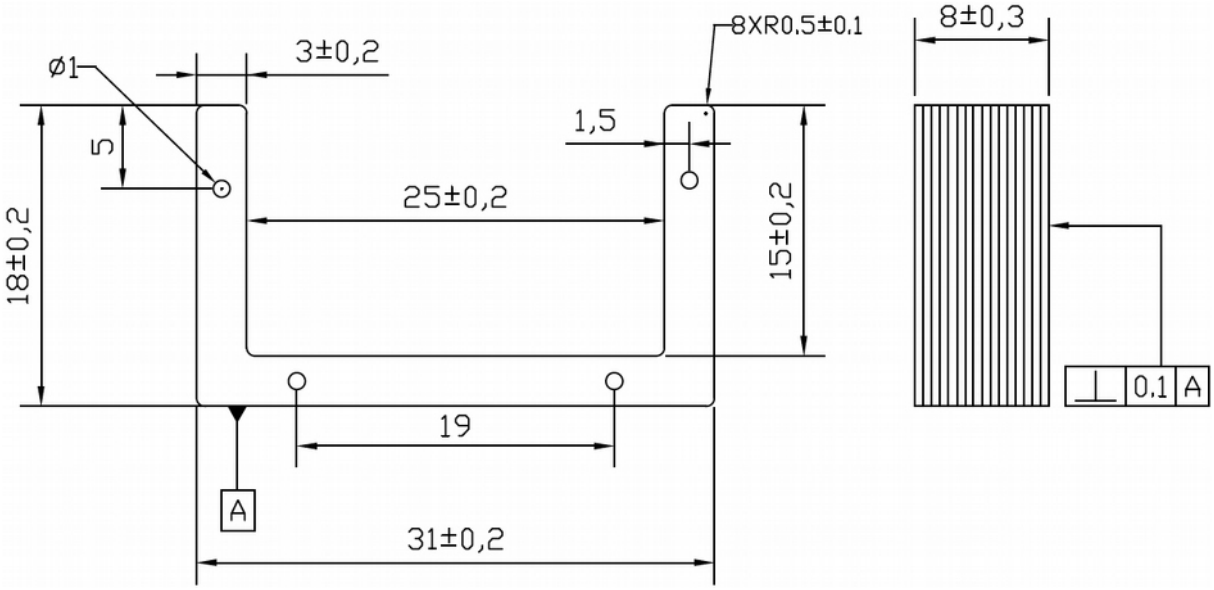
Geometry LU20-8-15-3



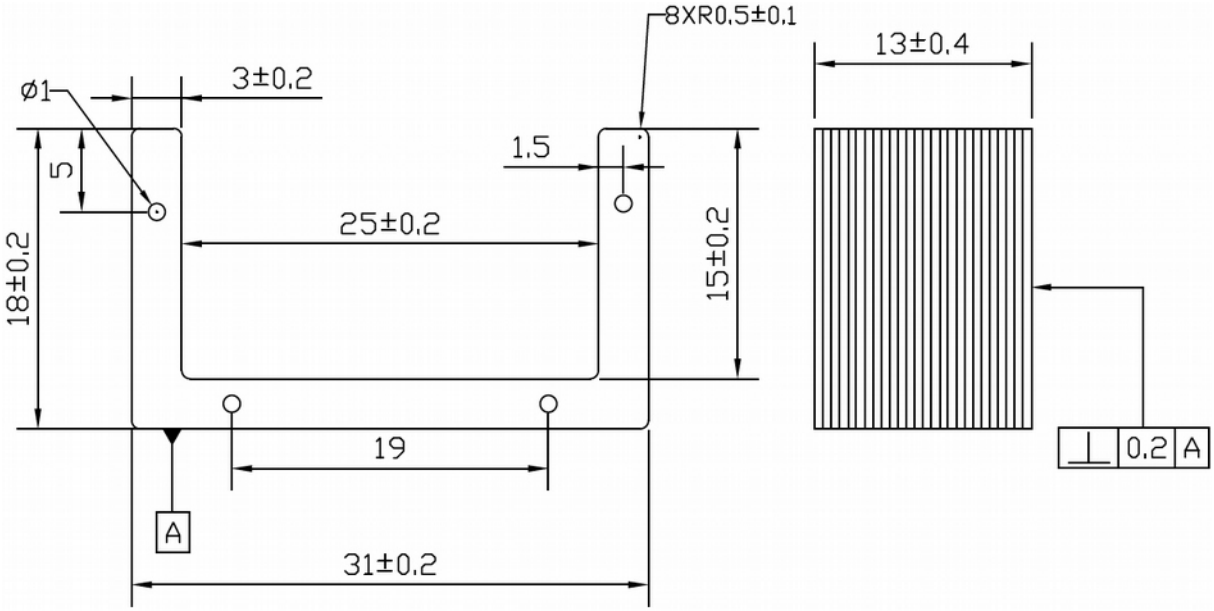
Geometry LU20-13-15-3



Geometry LU25-8-18-3



Geometry LU25-13-18-3



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