



CCNT-040-030-015-LFBL

Nanocrystalline toroidal core 40x30x15 mm

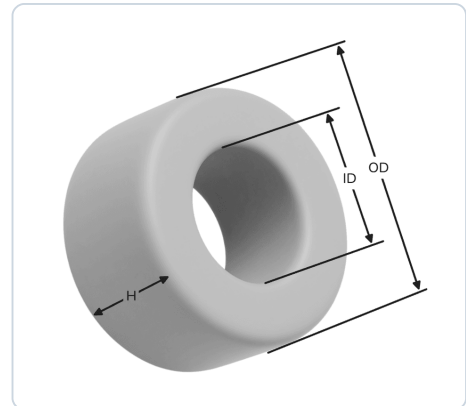
DIMENSIONS

Parameter	Bare (mm)	Cased (mm)
Outside diameter (OD)	40	41.1
Inside diameter (ID)	30	29.3
Height (H)	15	15.2

Dimensions Summary: Bare OD 40mm x ID 30mm x H 15mm; Cased OD 41.1mm x ID 29.3mm x H 15.2mm

Finished tolerance: 0.4mm

Case marking uses bare core dimensions.



CORE PROPERTIES

A_{Fe}	0.62 cm ²	L_{Fe}	11 cm	B_s	1.25 T	μ_i	50,000 (nominal)
Working temp	-40°C – +150°C	Curie	560 °C	Casing	Powder Coating	Weight	60 g

INDUCTANCE FACTOR AL ($\mu H/N^2$)

1kHz @ 0.3V, N=1 ($\mu H/N^2$)	10kHz @ 0.3V, N=1 ($\mu H/N^2$)	100kHz @ 0.3V, N=1 ($\mu H/N^2$)
20	17	3

DESIGN NOTE

Published AL is one turn through the window (Kelvin clips) at 0.3 V, not a 2 mT small-signal AL. At 1 kHz this drive saturates the smaller cores. Estimate inductance as $L \approx AL \times N^2$ on a wound part, then verify. Size the winding to the finished inside diameter when it is published, not the bare ID. Keep peak flux within 1.25 T. The finish is powder coating; keep continuous duty within the coating rating.

RECOMMENDED USAGE

Current Transformers | Ground-Fault Sensing | Prototype Magnetics

DIY AND R&D

Diy Current-Sensing Builds | Benchtop Transformer Prototyping | Hobbyist Magnetics Experiments

TECHNICAL APPLICATIONS

Current Transformers (powder-Coated Lf Toroid) | Ground-Fault Sensing (powder-Coated Lf Toroid) | Prototype Magnetics (powder-Coated Lf Toroid)

DOCUMENT CONTROL

Author	Created	Approver	Approved
CCNT-040-030-015-LFBL Aditya R.	https://centuracores.com/products/ccnt-040-030-015-lfbl/ 6 Jun 2026	Mahavir S.	2026-10-16 15 Jun 2026