

CENTURACORES

Nanocrystalline Transformer Cores

<https://centuracores.com/products/ccnt-105-075-030-hfbk/>

Product datasheet: CCNT-105-075-030-HFBK

Product information

Nanocrystalline toroidal core 105x75x30 mm

Bare size: 105x75x30 mm

Finish: Black PBT Class B 130C

CCNT-105-075-030-HFBK is a 105x75x30 mm nanocrystalline toroidal core for medium-frequency power transformers, high-current CTs, and solid-state transformer cores. Its nanocrystalline HF characteristic suits higher-frequency magnetics where size, window, and permeability must stay in balance. Choose this size when cable or busbar clearance and magnetic area come first.

Bare core dimensions

Outer diameter (OD): 105 mm

Inner diameter (ID): 75 mm

Height (H): 30 mm

Cased / finished dimensions

Outer diameter (OD): 109.4 mm

Inner diameter (ID): 70.6 mm

Height (H): 34.5 mm

Tolerance: 1mm

Size marking on the case is the bare core dimension, not the cased or finished size.

Magnetic properties

Effective area A_e : 3.69 cm²

Mean path length L_e : 28.3 cm

AL @ 10kHz, 2mT: 133 uH/T²

AL @ 100kHz, 2mT: 37 uH/T²

Saturation B_s : 1.25 Tesla

Initial permeability μ_i : 80000

Curie temperature: 560 C

Operating temperature: -40 deg C to +130 deg C

Net weight: 750 g

Applications

- medium-frequency power transformers
- high-current CTs
- solid-state transformer cores
- industrial power conversion
- medium-frequency (1–20kHz) power transformers
- high-current protection/metering CTs
- solid-state transformer (SST) cores
- industrial power conversion isolation transformers