

CENTURACORES

Nanocrystalline Transformer Cores

<https://centuracores.com/products/ccnt-110-080-040-hfbk/>

Product datasheet: CCNT-110-080-040-HFBK

Product information

Nanocrystalline toroidal core 110x80x40 mm

Bare size: 110x80x40 mm

Finish: Black PBT Class B 130C

CCNT-110-080-040-HFBK is a 110x80x40 mm nanocrystalline toroidal core for EV charger DC-DC stage transformers, solid-state/medium-frequency transformers, and utility-scale CTs. 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): 110 mm

Inner diameter (ID): 80 mm

Height (H): 40 mm

Cased / finished dimensions

Outer diameter (OD): 116 mm

Inner diameter (ID): 75.2 mm

Height (H): 46.9 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 : 4.92 cm²

Mean path length L_e : 29.8 cm

AL @ 10kHz, 2mT: 165 uH/T²

AL @ 100kHz, 2mT: 47 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: 1056 g

Applications

- EV charger DC-DC stage transformers
- solid-state/medium-frequency transformers
- utility-scale CTs
- high-power converter cores
- EV charging DC-DC stage medium-frequency transformers
- solid-state transformer (SST) cores for grid applications
- utility-scale/high-current CTs
- high-power converter isolation transformers