FURUTECH HF-A-NCF & HF-X-NCF HDMI Cable differences

HF-A-NCF

Active Optical HDMI Cable (AOC)

Designed primarily for ultra high-speed video transmission and long-distance HDMI applications.

Key Characteristics

- Active-type HDMI cable incorporating special **photoelectric conversion chips**
- Hybrid design using:
    - Optical fiber transmission
    - Furutech α (Alpha) conductors
- Supports:
    - 8K/60p/48Gbps
    - 4K/120p/32.08Gbps
    - HDCP1.4/2.2/2.3
    - eARC/ARC
    - HDR10/HDR10+
    - VRR/60Hz~240Hz(Refresh rate)
    - DSC, QMS, QFT, ALLM.

Important Technical Note

Because the HF-A-NCF is an **active optical HDMI cable**, it contains internal conversion circuitry and photoelectric chips designed specifically to optimize high-bandwidth video signal transmission.

In some specialized high-end audio applications — particularly:

- I2S audio transmission
- CD transports
- SACD transports
- External DAC connections using HDMI-style connectors

— the active conversion circuitry may affect compatibility or performance.

For this reason, Furutech does **not** recommend the HF-A-NCF for certain audio-only HDMI implementations that do not strictly follow conventional HDMI video specifications.

Additional Considerations

- Directional cable design (“Source” and “Display” ends must be connected correctly)

- Ideal for:
    - Home theater systems
    - 8K/4K video systems
    - Long cable runs
    - AV installations requiring maximum bandwidth stability

HF-X-NCF

Passive High-End Audio HDMI Cable

Designed specifically for high-end audio signal transmission.
The HF-X-NCF is a **passive HDMI cable** and does not use active optical conversion chips or internal signal processing circuitry.
Because of this design approach, it is the recommended Furutech HDMI cable for:

- CD transports
- SACD transports
- I2S connections
- Audio-focused HDMI applications
- Specialized DAC and digital transport systems
- 8K/4K video systems

Furutech engineering has confirmed that:
“The HF-X-NCF can be used for I2S connection.”

Why HF-X-NCF is Preferred for Audio

Many high-end audio manufacturers use HDMI connectors purely as a physical interface for proprietary digital audio transmission and not as a standard HDMI video protocol.
In these situations:

- Passive transmission is often preferred
- Additional active circuitry may interfere with synchronization or compatibility
- The HF-X-NCF provides a more direct and audio-focused signal path

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Simple Recommendation Guide

Application	Recommended Cable
8K / 4K video systems	HF-A-NCF (Bright and Vibrant colors) HF-X-NCF (Excellent color saturation)

FURUTECH HF-A-NCF & HF-X-NCF HDMI Cable differences

Application	Recommended Cable
Long HDMI runs	HF-A-NCF
Home theater installations	HF-A-NCF or HF-X-NCF
CD / SACD transport	HF-X-NCF
I2S audio connection	HF-X-NCF
DAC to transport connection	HF-X-NCF
Audio-only HDMI applications	HF-X-NCF