



Tech Tips with Ronald Wallace

Our Cabling Expert, Ron, has searched far and wide to bring you the best and most informative facts for your cabling needs. This month, Ron researched CAT 6A Types and Diameters.

“CAT 6A cable has larger outside diameter (OD) than previous generation cable, and TIA standards allow up to .354" OD, a 54% increase over CAT 6 OD average of .23". Below is a breakdown of the OD in different types of CAT 6A cable, each with unique characteristics to account for when installing” (Leviton.com).



1st Gen

1st Generation UTP

“First generation UTP cable is designed and manufactured with tighter twists, larger conductor size, and more complex center splines than CAT 6 cable. These characteristics increase cable OD and result in heavier cable weight, reduced fill capacity, and a larger bend radius” (Leviton.com).



2nd Gen

2nd Generation UTP

“Second generation UTP cable also has tighter twists and larger conductors than CAT 6, but incorporates new cable design elements such as filler tubes or non-conductive isolation wraps that allow a smaller cable OD while retaining 6A performance. Second generation cable is lighter and offers better performance with a smaller bend radius” (Leviton.com).



shielded

Shielded

“Shielded cable provides higher immunity to EMI/RFI and has a smaller OD, typically .29"-.32". However, the cable has a drain wire and foil shield that will increase installation time. In addition, every component in the system must be shielded and properly bonded to ground in order to be effective” (Leviton.com).

Cable Type	5e	6	6A Gen1	6A Gen 2	6A Shielded	6A Max
Average OD	.185"	.230"	.330"	.300"	.290"	.354"

Resource:

http://www.leviton.com/OA_HTML/SectionDisplay.jsp?section=51424&minisite=10251