



## Specification Sheet:

# Nanoptek VLT™ Visible Light Titania™ (TiO<sub>2</sub>:C)

Carbon-doped titanium oxide nanopowder visible light photocatalyst, ~100 nm particle size, ~95% with 4-5% carbon on atomic percent basis and ≤ 0.5% trace metals basis

**MSDS:** Not yet available for VLT™; MSDS for titanium dioxide is attached

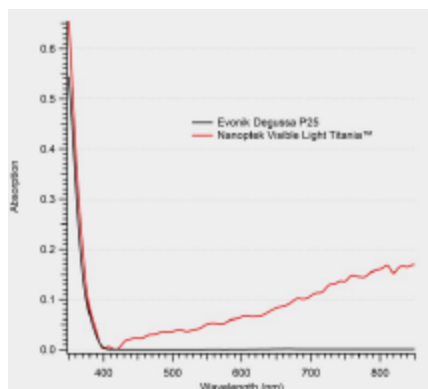
**Synonym:** Nanoptek Visible Light Titania™, VLT™, carbon-doped titania, carbon-doped titanium dioxide, visible light photocatalyst

**CAS Number:** Not yet available for VLT™; see 13463-67-7 for TiO<sub>2</sub>

**Linear formula:** TiO<sub>2</sub>:C      **Molecular Weight:** 79.90 g/mol

**EC Number:** Not yet available for VLT™; see 236-675-5 for TiO<sub>2</sub>

**MDL Number:** Not yet available for VLT™; see MFCD00011269 for TiO<sub>2</sub>



Properties	
<b>Related Categories</b>	Ti, materials science, metal and ceramic science, nanomaterials, nanoparticles, oxides, photocatalysts, visible light photocatalysts
<b>Assay</b>	~95% TiO <sub>2</sub> with 4-5% C on atomic percentage basis, and ≤ 0.5% trace metals basis
<b>Form</b>	Nanopowder solid
<b>Particle Size</b>	~100 nm
<b>Surface Area m<sup>2</sup>/g (BET)</b>	Has not been measured yet
<b>MP</b>	1850°C
<b>Color</b>	Dark grey (see insert below right)
<b>Absorption spectrum description</b>	Absorbs strongly in UVA, UVB, UVC, with lower absorption in blue increasing gradually to broad peak in near IR (see insert above left)
<b>Photocatalytic reaction rate</b>	Typically over 20X faster than industry leading titania photocatalysts in reducing total organic carbon (TOC Analysis results from VHG Labs available)

Description	
<b>Packaging</b>	200 mg in 4 ml glass vial in antistatic opaque black polypropylene bag
<b>Legal Information</b>	VLT™ and Visible Light Titania™ are trademarks of Nanoptek Corporation. U.S. Patents 7,628,928 and 7,947,221, others pending. "Nu" logo is Registered ®Trademark of Nanoptek.

Price and Availability	
<b>Sample size</b>	200 mg
<b>Price</b>	Free for evaluation by qualified interested parties
<b>Lead time</b>	Typically 1-3 weeks



Safety Information	
<i>Please refer to attached MSDS sheets for titanium dioxide nanopowder</i>	

<b>Manufacturer</b>	Nanoptek Corporation
<b>Address</b>	63 Great Road, Maynard, MA 01754
<b>Website</b>	<a href="http://www.nanoptek.com">www.nanoptek.com</a>