

# Lab Turbidimeters

## Quick Reference Guide

Model	TL2300 EPA	TL2310 ISO	TL2350 EPA	TL2360 ISO
<b>Regulatory</b>	Meets EPA Method 180.1	Meets ISO 7027, DIN EN 27027, DIN 38404 and NFT 9033	Meets EPA Method 180.1	Meets ISO 7027, DIN EN 27027, DIN 38404 and NFT 9033
<b>Light Source</b>	Tungsten filament lamp	Light-emitting diode (LED) at 860 ± 30 nm	Tungsten filament lamp	Light-emitting diode (LED) at 860 ± 30 nm
<b>Units</b>	NTU and EBC	FNU and NTU	NTU, EBC, Abs (absorbance), %T (% transmittance) and mg/L	FNU, FAU, NTU, EBC, Abs (absorbance), %T (% transmittance) and mg/L
<b>Range</b>	0 - 4000 NTU	0 - 1000 NTU	0 - 10000 NTU	0 - 10000 NTU
<b>Accuracy</b>	Ratio on: ±2% of reading plus 0.01 NTU from 0 - 1000 NTU, ±5% of reading from 1000 - 4000 NTU based on formazin primary standard  Ratio off: ±2% of reading plus 0.01 NTU from 0 - 40 NTU	±2% of reading plus 0.01 FNU/NTU from 0 - 1000 FNU/NTU	Ratio on: ±2% of reading plus 0.01 NTU from 0 - 1000 NTU, ±5% of reading from 1000 - 4000 NTU ±10 % of reading from 4000 - 10000 NTU  Ratio off: ±2% of reading plus 0.01 NTU from 0 - 40 NTU	FNU: ±2% of reading plus 0.01 FNU from 0 - 1000 FNU  FAU: ±10% of reading from 20 - 10000 NTU  NTU: ±2% of reading plus 0.01 NTU from 0 - 1000 NTU, ±5% of reading from 1000 - 4000 NTU, ±10% of reading from 4000 - 10000 NTU
<b>Repeatability</b>	±1% of reading or 0.01 NTU, whichever is greater (under reference conditions)			
<b>Response Time</b>	Signal averaging off: 6.8 seconds / Signal averaging on: 14 seconds (when 10 measurements are used to calculate the average)			
<b>Stabilization Time</b>	Ratio on: 30 minutes after start-up Ratio off: 60 minutes after start-up	Immediately	Ratio on: 30 minutes after start-up Ratio off: 60 minutes after start-up	Immediately
<b>Reading Modes</b>	Single, continuous, Rapidly Settling Turbidity™, signal averaging on or off, ratio on or off	Single, continuous, Rapidly Settling Turbidity™, signal averaging on or off	Single, continuous, Rapidly Settling Turbidity™, signal averaging on or off, ratio on or off	Manual or auto range, signal averaging on and adjustable or off, ratio on or off
<b>Display</b>	17.8 mm (7 in.) color touch screen			
<b>Communication</b>	USB			
<b>Interface</b>	2 USB-A ports for USB flash drive, external thermal printer, keyboard and barcode scanner			
<b>Data Logging</b>	2000 total logs, includes reading log, verification log and calibration log			
<b>Air Purge</b>	Dry nitrogen or instrument grade air (ANSI MC 11.1, 1975) 0.1 scfm at 69 kPa (10 psig); 138 kPa (20 psig) max Hose barb connection for 1/8-inch tubing			
<b>Sample Cell Compatibility</b>	Round cells 95 x 25 mm (3.74 x 1 in.) borosilicate glass with rubber-lined screw caps			
<b>Sample Requirements</b>	25 mm sample cell: 20 mL minimum 0 to 70 °C (32 to 158 °F)			
<b>Certifications</b>	CE, KC, RCM			
<b>Power requirements</b>	100 - 240 V AC, 50/60 Hz, 3.4 A			
<b>What's included?</b>	TL2300 Turbidimeter, silicone oil, oiling cloth, USEPA filter assembly, 1-inch sample cells (30 mL) with caps (6x), Gelex secondary turbidity standardization kit, Stablcal calibration kit, power supply, power cord, dust cover	TL2310 Turbidimeter, silicone oil, oiling cloth, 1-inch sample cells (30 mL) with caps (6x), Gelex secondary turbidity standardization kit, Stablcal calibration kit, power supply, power cord, dust cover	TL2350 Turbidimeter, silicone oil, oiling cloth, USEPA filter assembly, 1-inch sample cells (30 mL) with caps (6x), Gelex secondary turbidity standardization kit, Stablcal calibration kit, power supply, power cord, dust cover	TL2360 Turbidimeter, silicone oil, oiling cloth, 1-inch sample cells (30 mL) with caps (6x), Gelex secondary turbidity standardization kit, Stablcal calibration kit, power supply, power cord, dust cover

*\*Subject to change without notice.*

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Model	2100Q	2100Q IS	TU5200 EPA	TU5200 ISO
Regulatory	EPA Method 180.1		EPA	DIN EN ISO 7027
Light Source	Tungsten Filament Lamp	LED	Class 2 laser product, with embedded 650 nm (EPA 0.43 mW), max. 0.55 mW (complies with IEC/EN 60825-1 and to 21 CFR 1040.10 in accordance with Laser Notice No. 50)	Class 1 laser product, with embedded 850 nm (ISO), max. 0.55 mW (complies with IEC/EN 60825-1 and to 21 CFR 1040.10 in accordance with Laser Notice No. 50)
Range	0 - 1000 NTU	0 - 1000 FNU	0 - 700 NTU / FNU / TE/F / FTU 0 - 100 mg/L 0 - 175 EBC	0 - 1000 NTU / FNU / TE/F / FTU 0 - 100 mg/L 0 - 250 EBC
Accuracy	$\pm 2\%$ of reading plus stray light		$\pm 2\%$ plus 0.01 NTU from 0 - 40 NTU; $\pm 10\%$ of reading from 40 - 1000 NTU based on Formazin primary standard (at 25 °C)	
Response Time	6 s in normal reading mode		Signal averaging off: 7 seconds Signal averaging on: 10 seconds (when averaging time is 5 seconds)	
Power Supply	4 NiMH 1.2 V AA batteries or 4 alkaline 1.5 V AA batteries or 100 - 240 VAC; 50/60 Hz (with optional Power or USB + Power module)		100 - 240 VAC; 50/60 Hz	
Operating Temperature Range	0 - 50 °C (32 - 122 °F)		10 - 40 °C (50 - 104 °F)	
Storage Conditions	-40 - 60 °C (-40 - 140 °F)		-30 - 60 °C (-22 - 140 °F)	
Enclosure Rating	IP67		IP20	
Sample Volume	15 mL			
Sample Cell Compatibility	60 x 25 mm (2.36 x 1 in.) borosilicate glass with screw cap			
Dimensions (H x W x D)	77 x 107 x 229 mm (3.0 x 4.2 x 9.0 in.)		195 x 409 x 278 mm (7.7 x 16.1 x 10.9 in.)	
Weight	0.53 kg (1.2 lbs) without batteries		2.4 kg (5.29 lbs.)	

