Spectrophotometric Report

This spectrophotometer report provides a comprehensive analysis of the sample. It includes the sample's absorbance spectrum, a table of absorbance values at specific wavelengths, and a detailed interpretation of the results. The report is designed to provide clear, actionable insights for further research or industrial applications.

General information:

Sample Name:

User:

Manufacturer: UTP

Model: UTP-CG-001

Serial Number: UTP30032024A

Wavelength Range: 340 - 850 nm

Baseline Correction: Yes

Date: 12-05-2024 09:47:40

Laboratory: Indicasat AIP

Location: Panama City, Panama

Light Source: High Power LED

Detector: CMOS

Test condition

Temperature: 25°C

Humidity: 50%

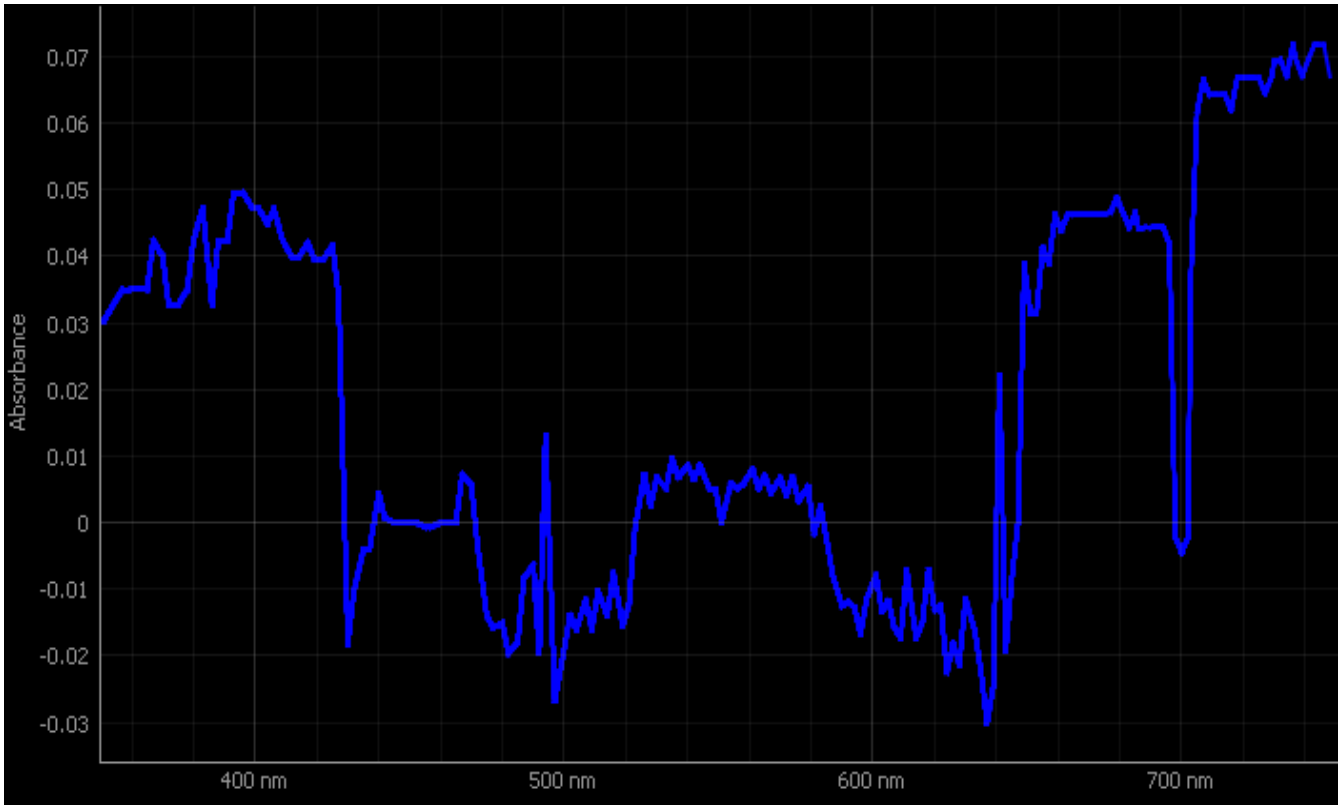
WL Range: 350 - 750 nm

Scan Speed: 39.55 nm/sec

Test mode: Single

Scan Mode: Absorbance

Measured Graph:



Parameters:

Key Parameters:

Max dB: 0.07184267010234766
Max nm: 736
Min dB: -0.0301219027778912
Min nm: 637
Violet's (428nm) dB: 0.03421869036498083
Blue's (474nm) dB: -0.01405289889527728
Green's (535nm) dB: 0.009580720378330382
Yellow's (587nm) dB: -0.007845227554971019
Orange's (609nm) dB: -0.01731562738675208
Red's (660nm) dB: 0.04623744388879351

Radiometric Parameters:

Radiant Flux: 1000 rad
Radiant Density: 518 rad/mm2
Color Rendering: 70
Thermal resistance: 1.6 C°/W
Radiant Efficacy: 206 rad/W

Electrical Parameters:

Voltage: 12 V
Current: 3 A
Power: 36 W
Power Factor: 1.0
Frequency: 60 Hz

Statistical Parameters:

Mean: 0.020270785544739673
Standard Deviation: 0.028842256340327495
Variance: 0.0008318757508011616
RMS: 0.035253092026118614
Weighted Average (nm): 587.4379907904162
Minimum Value: -0.0301219027778912
Maximum Value: 0.07184267010234766
Number of Values: 198

Colorimetric Parameters:

Chromaticity Coordinate (X-axis): 0.30053
Chromaticity Coordinate (Y-axis): 0.3205
CCT: 7015K
Prcp WL: - Ld: 637nm
Purity: 10.5%
Peak WL: - Lp: 736nm
FWHM: 12.0nm
Ratio (Red): 13.9%
Ratio (Green): 86.1%
Ratio (Blue): 0.0%
Render Index (Ra): 0.0
EEI: 0.00015
R1: 88
R2: 0.0
R3: 0.0
R4: 0.0
R5: 0.0
R6: 0.0
R7: 0.0
R8: 0.0
R9: 0.0
R10: 0.0
R11: 0.0
R12: 0.0
R13: 0.0
R14: 0.0
R15: 0.0

Measured Data:

WL (nm)	Abs (dB)	T (I/Io)
305	0.00069	0.99842
306	0.00046	0.99895
307	0.00023	0.99947
308	0.00000	1.00000
309	0.01333	0.96978
310	0.02665	0.94048
311	0.03998	0.91206
312	0.03841	0.91536
313	0.03684	0.91867
314	0.03527	0.92200
315	0.03286	0.92713
316	0.03045	0.93229
317	0.03121	0.93066
318	0.03197	0.92903
319	0.03273	0.92741
320	0.03353	0.92570
321	0.03433	0.92399
322	0.03514	0.92228
323	0.03273	0.92740
324	0.03033	0.93254
325	0.03033	0.93254
326	0.03033	0.93254
327	0.03033	0.93254
328	0.02954	0.93425
329	0.02874	0.93596
330	0.02795	0.93768
331	0.02795	0.93768
332	0.02795	0.93768
333	0.02795	0.93768
334	0.02795	0.93768
335	0.02795	0.93768
336	0.02795	0.93768
337	0.02795	0.93768
338	0.02795	0.93768
339	0.02795	0.93768
340	0.02795	0.93768
341	0.02795	0.93768
342	0.02795	0.93768
343	0.02795	0.93768
344	0.02874	0.93596
345	0.02954	0.93425
346	0.03033	0.93254
347	0.03033	0.93254
348	0.03033	0.93254
349	0.03033	0.93254
350	0.03033	0.93254
351	0.03033	0.93254
352	0.03113	0.93083
353	0.03193	0.92912
354	0.03273	0.92741
355	0.03349	0.92579
356	0.03424	0.92418
357	0.03500	0.92257
358	0.03500	0.92257
359	0.03500	0.92257
360	0.03505	0.92247
361	0.03509	0.92238
362	0.03514	0.92228
363	0.03509	0.92238
364	0.03505	0.92247
365	0.03500	0.92257
366	0.03871	0.91473
367	0.04241	0.90696
368	0.04160	0.90866
369	0.04079	0.91036
370	0.03998	0.91206
371	0.03635	0.91970
372	0.03273	0.92741
373	0.03273	0.92741
374	0.03273	0.92741
375	0.03273	0.92741
376	0.03349	0.92579
377	0.03424	0.92418
378	0.03500	0.92257
379	0.03871	0.91473
380	0.04241	0.90696
381	0.04404	0.90356
382	0.04568	0.90017
383	0.04731	0.89679
384	0.04245	0.90688
385	0.03759	0.91709
386	0.03273	0.92741
387	0.03749	0.91730
388	0.04225	0.90730
389	0.04230	0.90719
390	0.04236	0.90708
391	0.04241	0.90696
392	0.04600	0.89951
393	0.04958	0.89211
394	0.04958	0.89211
395	0.04958	0.89211
396	0.04958	0.89211
397	0.04882	0.89367
398	0.04807	0.89523
399	0.04731	0.89679
400	0.04731	0.89679
401	0.04731	0.89679
402	0.04649	0.89848
403	0.04567	0.90017
404	0.04486	0.90187
405	0.04599	0.89952
406	0.04713	0.89717
407	0.04550	0.90053
408	0.04387	0.90391
409	0.04225	0.90730

Measured Data (cont):

WL (nm)	Abs (dB)	T (I/Io)
410	0.04144	0.90899
411	0.04063	0.91069
412	0.03982	0.91238
413	0.03982	0.91238
414	0.03982	0.91238
415	0.04058	0.91080
416	0.04133	0.90922
417	0.04209	0.90764
418	0.04088	0.91017
419	0.03967	0.91270
420	0.03962	0.91281
421	0.03957	0.91291
422	0.03952	0.91302
423	0.04022	0.91156
424	0.04091	0.91009
425	0.04161	0.90864
426	0.03791	0.91640
427	0.03422	0.92423
428	0.01674	0.96219
429	-0.00074	1.00172
430	-0.01823	1.04286
431	-0.01421	1.03326
432	-0.01019	1.02375
433	-0.00818	1.01900
434	-0.00616	1.01428
435	-0.00414	1.00957
436	-0.00409	1.00947
437	-0.00405	1.00936
438	-0.00124	1.00286
439	0.00156	0.99641
440	0.00437	0.98999
441	0.00253	0.99420
442	0.00068	0.99843
443	0.00046	0.99895
444	0.00023	0.99948

WL (nm)	Abs (dB)	T (I/Io)
445	0.00000	1.00000
446	0.00000	1.00000
447	0.00000	1.00000
448	0.00000	1.00000
449	0.00000	1.00000
450	0.00000	1.00000
451	0.00000	1.00000
452	0.00000	1.00000
453	-0.00023	1.00052
454	-0.00045	1.00105
455	-0.00068	1.00157
456	-0.00068	1.00157
457	-0.00068	1.00157
458	-0.00045	1.00105
459	-0.00023	1.00052
460	0.00000	1.00000
461	0.00000	1.00000
462	0.00000	1.00000
463	0.00000	1.00000
464	0.00000	1.00000
465	0.00000	1.00000
466	0.00362	0.99169
467	0.00725	0.98345
468	0.00670	0.98468
469	0.00616	0.98592
470	0.00561	0.98716
471	0.00108	0.99752
472	-0.00346	1.00800
473	-0.00699	1.01623
474	-0.01052	1.02452
475	-0.01405	1.03289
476	-0.01492	1.03494
477	-0.01578	1.03700
478	-0.01555	1.03645
479	-0.01532	1.03589

WL (nm)	Abs (dB)	T (I/Io)
480	-0.01508	1.03534
481	-0.01738	1.04084
482	-0.01968	1.04636
483	-0.01913	1.04502
484	-0.01857	1.04368
485	-0.01801	1.04235
486	-0.01320	1.03086
487	-0.00839	1.01950
488	-0.00771	1.01791
489	-0.00703	1.01631
490	-0.00635	1.01472
491	-0.01301	1.03040
492	-0.01967	1.04633
493	-0.00327	1.00757
494	0.01312	0.97024
495	-0.00019	1.00044
496	-0.01351	1.03159
497	-0.02682	1.06371
498	-0.02425	1.05743
499	-0.02168	1.05118
500	-0.01909	1.04493
501	-0.01649	1.03871
502	-0.01390	1.03252
503	-0.01499	1.03512
504	-0.01608	1.03772
505	-0.01460	1.03419
506	-0.01312	1.03067
507	-0.01164	1.02716
508	-0.01383	1.03236
509	-0.01603	1.03759
510	-0.01319	1.03083
511	-0.01035	1.02412
512	-0.01156	1.02697
513	-0.01276	1.02983
514	-0.01397	1.03269

WL (nm)	Abs (dB)	T (I/Io)
515	-0.01078	1.02514
516	-0.00760	1.01764
517	-0.01024	1.02386
518	-0.01288	1.03011
519	-0.01553	1.03640
520	-0.01393	1.03260
521	-0.01233	1.02880
522	-0.00659	1.01528
523	-0.00084	1.00194
524	0.00185	0.99575
525	0.00454	0.98960
526	0.00723	0.98349
527	0.00483	0.98894
528	0.00243	0.99442
529	0.00460	0.98946
530	0.00677	0.98452
531	0.00623	0.98576
532	0.00569	0.98699
533	0.00514	0.98823
534	0.00736	0.98319
535	0.00958	0.97818
536	0.00820	0.98130
537	0.00682	0.98443
538	0.00739	0.98312
539	0.00797	0.98182
540	0.00854	0.98052
541	0.00754	0.98278
542	0.00654	0.98505
543	0.00757	0.98271
544	0.00860	0.98038
545	0.00745	0.98299
546	0.00630	0.98560
547	0.00515	0.98821
548	0.00512	0.98827
549	0.00510	0.98833

WL (nm)	Abs (dB)	T (I/Io)
550	0.00255	0.99415
551	0.00000	1.00000
552	0.00196	0.99549
553	0.00393	0.99100
554	0.00589	0.98653
555	0.00551	0.98739
556	0.00513	0.98826
557	0.00546	0.98750
558	0.00580	0.98674
559	0.00654	0.98505
560	0.00728	0.98337
561	0.00802	0.98169
562	0.00660	0.98492
563	0.00517	0.98816
564	0.00613	0.98598
565	0.00709	0.98381
566	0.00578	0.98678
567	0.00447	0.98976
568	0.00522	0.98806
569	0.00597	0.98635
570	0.00672	0.98465
571	0.00541	0.98762
572	0.00410	0.99060
573	0.00547	0.98749
574	0.00683	0.98439
575	0.00504	0.98845
576	0.00325	0.99254
577	0.00397	0.99090
578	0.00469	0.98926
579	0.00541	0.98762
580	0.00187	0.99569
581	-0.00166	1.00383
582	0.00043	0.99902
583	0.00251	0.99423
584	0.00003	0.99994

WL (nm)	Abs (dB)	T (I/Io)
585	-0.00246	1.00569
586	-0.00515	1.01194
587	-0.00785	1.01823
588	-0.00942	1.02193
589	-0.01100	1.02564
590	-0.01257	1.02937
591	-0.01226	1.02863
592	-0.01194	1.02788
593	-0.01233	1.02879
594	-0.01271	1.02969
595	-0.01469	1.03440
596	-0.01667	1.03913
597	-0.01407	1.03292
598	-0.01147	1.02675
599	-0.01029	1.02397
600	-0.00911	1.02119
601	-0.00793	1.01842
602	-0.01062	1.02475
603	-0.01331	1.03113
604	-0.01253	1.02927
605	-0.01175	1.02741
606	-0.01381	1.03231
607	-0.01588	1.03724
608	-0.01660	1.03896
609	-0.01732	1.04068
610	-0.01228	1.02868
611	-0.00725	1.01683
612	-0.01062	1.02477
613	-0.01400	1.03277
614	-0.01738	1.04083
615	-0.01622	1.03805
616	-0.01506	1.03528
617	-0.01109	1.02585
618	-0.00711	1.01651
619	-0.01013	1.02359

WL (nm)	Abs (dB)	T (I/Io)
620	-0.01314	1.03072
621	-0.01276	1.02981
622	-0.01237	1.02890
623	-0.01744	1.04097
624	-0.02250	1.05318
625	-0.02033	1.04792
626	-0.01816	1.04269
627	-0.01974	1.04649
628	-0.02132	1.05031
629	-0.01638	1.03844
630	-0.01145	1.02671
631	-0.01304	1.03049
632	-0.01464	1.03428
633	-0.01623	1.03809
634	-0.01928	1.04540
635	-0.02233	1.05277
636	-0.02623	1.06225
637	-0.03012	1.07182
638	-0.02737	1.06504
639	-0.02461	1.05831
640	-0.00125	1.00288
641	0.02211	0.95037
642	0.00136	0.99686
643	-0.01938	1.04563
644	-0.01393	1.03259
645	-0.00848	1.01971
646	-0.00424	1.00981
647	0.00000	1.00000
648	0.01939	0.95633
649	0.03878	0.91457
650	0.03515	0.92224
651	0.03153	0.92998
652	0.03153	0.92998
653	0.03153	0.92998
654	0.03641	0.91958

WL (nm)	Abs (dB)	T (I/Io)
655	0.04130	0.90929
656	0.04011	0.91177
657	0.03893	0.91426
658	0.04258	0.90660
659	0.04624	0.89901
660	0.04504	0.90149
661	0.04384	0.90398
662	0.04504	0.90149
663	0.04624	0.89901
664	0.04624	0.89901
665	0.04624	0.89901
666	0.04633	0.89882
667	0.04641	0.89864
668	0.04641	0.89864
669	0.04641	0.89864
670	0.04641	0.89864
671	0.04641	0.89864
672	0.04641	0.89864
673	0.04641	0.89864
674	0.04641	0.89864
675	0.04641	0.89864
676	0.04650	0.89846
677	0.04659	0.89828
678	0.04771	0.89597
679	0.04883	0.89366
680	0.04771	0.89597
681	0.04659	0.89828
682	0.04547	0.90060
683	0.04434	0.90294
684	0.04547	0.90060
685	0.04659	0.89828
686	0.04417	0.90329
687	0.04426	0.90311
688	0.04434	0.90294
689	0.04434	0.90294

WL (nm)	Abs (dB)	T (I/Io)
690	0.04434	0.90294
691	0.04443	0.90276
692	0.04451	0.90258
693	0.04443	0.90276
694	0.04434	0.90294
695	0.04313	0.90545
696	0.04193	0.90797
697	0.01984	0.95535
698	-0.00226	1.00521
699	-0.00338	1.00781
700	-0.00450	1.01042
701	-0.00338	1.00781
702	-0.00226	1.00521
703	0.03712	0.91807
704	0.04944	0.89239
705	0.06176	0.86744
706	0.06414	0.86270
707	0.06652	0.85798
708	0.06539	0.86021
709	0.06427	0.86245
710	0.06427	0.86245
711	0.06427	0.86245
712	0.06427	0.86245
713	0.06427	0.86245
714	0.06427	0.86245
715	0.06314	0.86470
716	0.06200	0.86696
717	0.06439	0.86220
718	0.06678	0.85747
719	0.06678	0.85747
720	0.06678	0.85747
721	0.06678	0.85747
722	0.06678	0.85747
723	0.06678	0.85747
724	0.06678	0.85747

WL (nm)	Abs (dB)	T (I/Io)
725	0.06678	0.85747
726	0.06565	0.85971
727	0.06452	0.86195
728	0.06565	0.85971
729	0.06678	0.85747
730	0.06931	0.85250
731	0.06944	0.85223
732	0.06958	0.85196
733	0.06831	0.85445
734	0.06704	0.85695
735	0.06944	0.85223
736	0.07184	0.84753
737	0.06958	0.85196
738	0.06831	0.85445
739	0.06704	0.85695
740	0.06831	0.85445
741	0.06958	0.85196
742	0.07071	0.84975
743	0.07184	0.84753
744	0.07184	0.84753
745	0.07184	0.84753
746	0.07184	0.84753
747	0.06944	0.85223
748	0.06704	0.85695
749	0.07184	0.84753