सीमाशुल्क अग्रिम विनिर्णय प्राधिकरण
Customs Authorityfor Advance Rulings
नवीन सीमाशुल्क भवन, बेलार्ड इस्टेट, मुंबई - ४००००१
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F.No. CAAR/CUS/APPL/162/2025 - O/o Commr-CAAR-Mumbai दिनांक/Date: 30.01.2026

Ruling No. & date	CAAR/Mum/ARC/143/2025-26 dated 30.01.2026
Issued by	Shri Prabhat K. Rameshwaram, Customs Authority for Advance Rulings, Mumbai
Name and address of the applicant	IDH Solutions Private Limited Godavari Park CHS, 502, 5th Floor, Plot No 1, Sector 6, Sanpada,, Navi Mumbai 400 705 {Email: hrgarg21@gmail.com}
Concerned Commissionerate	The Commissioner of Customs (NS-V), JNCH, Tal- Uran, District. Raigad, Nhava Sheva, Maharashtra – 400 707 Email: commr-ns5@gov.in

ध्यान दीजिए/ **N.B.:**

1. सीमाशुल्क अधिनियम, 1962 की धारा 28I की उप-धारा (2) के तहत किए गए इस आदेश की एक प्रति संबंधित को निःशुल्क प्रदान की जाती है।

   A copy of this order made under sub-section (2) of Section 28-I of the Customs Act, 1962 is granted to the concerned free of charge.

2. इस अग्रिम विनिर्णय आदेश के खिलाफ कोई भी अपील ऐसे निर्णय या आदेश के संचार की तारीख से 60 दिनों के भीतर संबंधित क्षेत्राधिकार के उच्च न्यायालय के समक्ष की जाएगी।

   Any appeal against this Advance Ruling order shall lie before the **High Court of concerned jurisdiction**, within 60 days from the date of the communication of such ruling or order.

3. धारा 28-I के तहत प्राधिकरण द्वारा सुनाया गया अग्रिम विनिर्णय तीन साल तक या कानून या तथ्यों में बदलाव होने तक, जिसके आधार पर अग्रिम विनिर्णय सुनाया गया है, वैध रहेगा, जो भी पहले हो।

   The advance ruling pronounced by the Authority under Section 28 - I shall remain valid for three years or till there is a change in law or facts on the basis of which the advance ruling has been pronounced, whichever is earlier.

4. जहां प्राधिकरण को पता चलता है कि आवेदक द्वारा अग्रिम विनिर्णय धोखाधड़ी या तथ्यों की गलत बयानी द्वारा प्राप्त किया गया था, उसे शुरू से ही अमान्य घोषित कर दिया जाएगा।

   Where the Authority finds that the advance ruling was obtained by the applicant by fraud or misrepresentation of facts, the same shall be declared void *ab initio*.

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Customs Authority For Advance Rulings, Mumbai

अग्रिम विनिर्णय / Advance Ruling

IDH Solutions Private Limited (having IEC No. AAICI2936A) and hereinafter referred to as 'the applicant', in short) filed an application (CAAR-1) for advance ruling before the Customs Authority for Advance Rulings, Mumbai (CAAR in short). The said application was received in the secretariat of the CAAR, Mumbai on 22.09.2025 along with enclosures in terms of Section 28H (1) of the Customs Act, 1962 (hereinafter referred to as the 'Act' also). The applicant is seeking advance ruling on the issue of classification of "LED Driver" under Customs Tariff Item (CTI) No 8504 40 90 of the First Schedule to the Customs Tariff Act, 1975.

2. The Applicant vide their application has submitted as follows:

2.1 The LED Driver is placed between the mains power and the LED light source. The LED light source is otherwise a low voltage device and cannot be connected directly to mains power. The function of an LED Driver is to convert (rectify) the incoming AC voltage of 220 240V to DC voltage and control the current based on the design of the LED light source with which it is used. Typically, an LED Driver will have a wide range of current as well as of voltage to accommodate different designs of LED light sources.

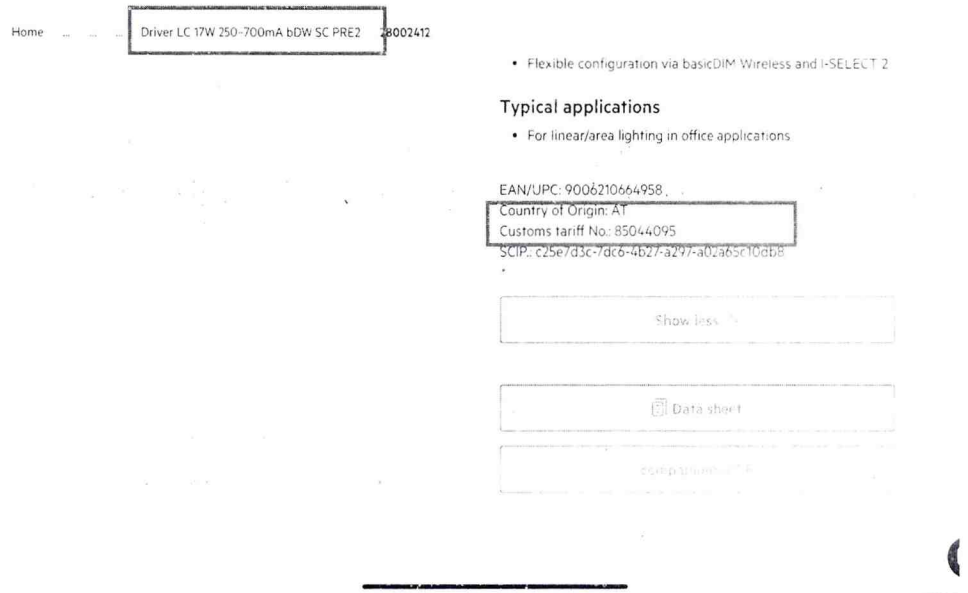
2.2 The wide operating voltage ensures that as the LED light source temperature changes and/or the conductivity of the LED light source changes, the LED Driver can accommodate these changes over the lifetime of the LED light source. Thus, by maintaining the DC Voltage on the output side, the LED light source is then operated as per its intended design ensuring that the LED light source provides the illumination as designed and also the lifetime of the LED light source is maintained.

2.3 Essentially the LED Driver works as a Rectifier or a Converter that converts the AC to DC and also reduces the current like a Choke. There is no specific classification of the product called LED Driver in HSN or in the First Schedule to the Customs Tariff Act, 1975. The Applicant intends to import the LED Drivers and before starting the import, wants certainty of Customs Duties applicable to avoid unsavory situation leading to avoidable litigation and attendant financial cost in future.

3. The applicant's interpretation of law and/or facts:

3.1 Classification of a product called 'LED Driver' under the First Schedule to the Customs Tariff Act, 1975 – two competing Chapter Headings 8504 and 9405.

Based on its function as a converter, the product is classified globally under the HSN Chapter Heading 8504 Sub-heading 8504 40 as Static Converter. Relevant data is found on websites of many manufacturers and suppliers of LED Drivers globally. An example from the website of Havell.com is for reference.



Some companies in India also use the HSN Code 8504 40 and in particular the Indian Customs Tariff Item (CTI) 8504 40 90 at eight-digit level to classify the LED Drivers for payment of GST. A screen shot of the Price List of M/s Havells India is for reference:

havells.com

7 W ceiling dome suitable for installation in 5.08 cm (2) deep junction box, slim junction box, cabinets and surface applications.

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Model	Ordering Code	HSN Code	List Price in ₹ Per Unit	Master Packing (No. of Unit/s)
JOY NEO LED CEILING DOME 7 W 6500 K	LHEAATP7IL1W007	94051100	483.05	24 N

OCTANE LED PANEL DRIVERS

LED edgelit panel drivers with universal connector for easy installations.

Model	Ordering Code	HSN Code	List Price in ₹ Per Unit	Master Packing (No. of Unit/s)
Panel Driver 3 W	LSSLNW0167	85044090	120.00	24 N
Panel Driver 4 W / 8 W	LSSLNW0168	85044090	180.00	24 N
Panel Driver 9 W / 12 W	LSSLNW0169	85044090	230.00	24 N
Panel Driver 15 W / 18 W	LSSLNW0170	85044090	280.00	24 N
Panel Driver 24 W	LSSLNW0171	85044090	300.00	24 N

E-LITE LED PRIDE PLUS/NXT

Decorative ultra slim round profile LED lighting fixture with extruded polycarbonate, environmental friendly, energy efficient ready to use pack.

Model	Ordering Code	HSN Code	List Price in ₹ Per Unit	Master Packing (No. of Unit/s)
LED L.Fixt Elite Pride Plus Batten 5 W 6500 K	LHEXBLP7IN1W005	94051100	183.62	20 N
LED L.Fixt Elite LED Pride Batten 9 W 6500 K	LHEXBLP7IN1W009	94051100	210.45	20 N
LED Pride Plus NXT Batten 20 W 6500 K	LHEXAPP7PN1W020	94051100	210.45	20 N
LED Pride Plus NXT Batten 22 W 6500 K	LHEXAPP7PN1W022	94051100	242.94	20 N

However, data search on assessment of imported LED Drivers by Customs in India reveals that these are being classified and assessed to duty under Chapter Heading 8504 Sub-heading 8504 40 as Static Converter (in particular under CTI 8504 40 90 at eight digit level as residuary CTI for Static Converter based on its function) as well as sometimes under Chapter Heading 9405 (CTI 9405 99 00 at eight digit level as parts of electric luminaires and light fittings) thereby creating confusion which needs a clarification by way of an Advance Ruling under Chapter V B of the Customs Act, 1962.

Chapter Heading 9405 of HSN as well as of the First Schedule to the Customs Tariff Act, 1975 under Section XX relating to 'Miscellaneous Manufactured Articles' covers inter-alia *'Luminaires and lighting fittings including searchlights and spotlights and parts thereof, not elsewhere specified or included'*.

Chapter sub-heading 8504 40 specifically covers Static Converters which include Rectifiers by which alternating current is converted to direct current. And that is what the product LED Driver does. Once the LED Drivers are classified as Rectifiers (within the group Static Converters) under Chapter sub-heading 8504 40, these are out of purview of Chapter Heading 9405 inasmuch as these are specifically included in Chapter sub-heading 8504 40.

3.2 Two Rulings of the US Customs and Border Protection on similar products holding the classification under HSN sub-heading 8504 40 are relied upon as under:

In case of **US Customs Ruling** HQ H121540 dated 02.11 2011, classification of light emitting diode (LED) drivers. The subject devices are identified as "Xitanium LED Drivers" for 12 volt (V) and 24V direct current (DC) LED systems. Relevant extracts of the said ruling as reproduced hereunder-

FACTS:

According to Protestant, the subject drivers are designed to tolerate sustained open circuits and short circuit output conditions while delivering constant current to high power LEDs and to prevent transients of current from damaging the LEDs. The drivers dissipate power in delivering that constant current to connected LEDs, which causes the case temperatures of the drivers to rise. Whenever the case temperatures of the drivers exceed a specified thermal protection standard, the drivers reduce output power to connected LEDs.

The drivers achieve this by converting 120 – 277 volts of alternating current (AC) to varying voltage levels of DC. The DC voltage levels depend upon the desired output current and the number of LEDs used in the load. The output power provided by the drivers is specified on the product labels and ranges from 12 watts to 150 watts (depending upon the model.

ISSUE:

Whether the merchandise is classified under subheading 8504.40.95, HTSUS, as rectifiers; subheading 8541.50.00, HTSUS, which provides for other semiconductor devices; or

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subheading **8541.90.00**, HTSUS, as parts of other semiconductor devices.

LAW AND ANALYSIS:

Classification under the HTSUS is made in accordance with the General Rules of Interpretation (GRIs). GRI 1 provides that the classification of goods shall be determined according to the terms of the headings of the tariff schedule and any relative section or chapter notes. In the event that the goods cannot be classified solely based on GRI 1, and if the headings and legal notes do not otherwise require, the remaining GRIs 2 through 6 may then be applied in order.

The HTSUS (2010) provisions under consideration in this case are as follows: 8504 Electrical transformers, static converters (for example, rectifiers) and inductors; parts thereof: * * * 8504.40 Static converters: * * * 8504.40.95 Other. * * * * 8541 Diodes, transistors and similar semiconductor devices; photosensitive semiconductor devices, including photovoltaic cells whether or not assembled in modules or made up into panels; light-emitting diodes; mounted piezoelectric crystals; parts thereof: * * * 8541.50.00 Other semiconductor devices * * * **8541.90.00** Parts. * * * * *

Legal Note 2 to Chapter 85, HTSUS, states that "[h]eadings 8501 to 8504 do not apply to goods described in heading 8541 [among others]." Legal Note 8 to that same chapter states that "[f]or the classification of [diodes, transistors and similar semiconductor devices], headings 8541 and 8542 shall take precedence over any other heading in the Nomenclature, except in the case of heading 8523, which might cover them by reference to, in particular, their function." Furthermore, Legal Note 2 to Section XVI states the following, in pertinent part:

Subject to the general provisions regarding the classification of parts (see the General Explanatory Note to Section XVI), parts of goods of this heading are also classified here ...

However, most of the electrical components of the devices of this heading are to be found in other headings of the Chapter, for example:

... (c) Semiconductor diodes, transistors, and thyristors (heading 85.41)"

Here, a subject driver contains an EMI and rectifier that convert incoming AC into a rectified sinusoidal waveform. The Boost Power Circuit then converts the rectified sinusoidal waveform to a fixed, regulated DC voltage. The PWM half-bridge power stage and the output EMI filter convert the DC voltage (from the boost power circuit output) to a high-frequency pulsating signal. The widths of the pulses are determined by the PWM half-bridge control stage. The high-frequency pulsating signal is fed to the primary side of an isolation transformer. The secondary signal is rectified and passed through a high-frequency filter to obtain the desired voltage/current for the LED loads. All of these functions act in concert to rectify the incoming alternating current to an outgoing direct current that powers the LEDs. In our opinion, the drivers fall squarely within subheading 8504, HTSUS, as rectifiers.

Protestant asserts that the drivers are not rectifiers because the bridges in the instant drivers are substantially similar in function to the BRDs of HQ 960323 and the thyristor modules of ABB Power Transmission because the subject drivers "generally rectify auxiliary output by converting DC voltage to a high frequency pulsating signal," and "the sole purpose of a rectifier [classifiable under heading 8504, HTSUS] is to convert AC to DC." See Protestant's March 7, 2011, submission at page 2. Protestant states that the devices are instead classifiable as semiconductor devices under 8541, HTSUS. We disagree.

Legal Note 8(a) to Chapter 85, HTSUS, defines "diodes, transistors and similar semiconductor devices" as devices the operation of which depends on variations in resistivity of the application of an electric field." Protestant posits that while the term "resistivity" is not defined in the HTS, resistivity is "the power or property of resistance" and "electrical resistance measured as a function of a given volume or area." See Attachment A to Protestant's AFR, citing Random House Webster's College Dictionary, 2nd Ed. (1997); see also http://www.electronics-tutorials.ws/diode/diode_1.html (cited by Protestant) (resistivity can generally be stated as the ratio of the voltage difference across an object/substance to the current flowing through it.) However, the discrete conversion of DC voltage to a high frequency pulsating signal within the drivers is not the subject drivers' main function. The drivers convert incoming alternating current to direct current before that direct current is then converted to the high frequency pulsating signal – a signal that itself is then rectified to a DC output. The conversion of DC electricity to the pulsating signal is merely an intermediate step in the drivers' overall function of rectifying AC electricity to DC electricity. That the drivers contain apparatus that regulates voltage of the emerging DC electricity does not alter the fact that the main function of the drivers is to rectify incoming AC electricity to a desired output of DC electricity that is ultimately delivered to the LEDs.

Protestant also cites HQ H084604, dated May 3, 2010, in support of its position. In that ruling, CBP reconsidered the classification of a solar module containing, among other things, bypass diodes to protect it from overheating by controlling the direction of the supplied electric current that flowed through the module. We had incorrectly classified the module under heading 8501, HTSUS, as an electrical generator because we believed that its bypass diodes placed it beyond the scope of heading 8541, per an incomplete reading of EN 85.41(B)(2)(i) ("[heading 8541] does not cover panels or modules equipped with elements, however simple (for example, diodes to control the direction of the current) ..."). However, HQ H084604 correctly noted that the "elements" described by the preclusion of EN 85.41(B)(2)(i) must also "supply power directly to an external load, such as a motor, an electrolyser (heading 8541)." Therefore, CBP reclassified the solar modules under 8541, HTSUS, because the module's diodes merely controlled the direction of current and did not supply power to the module.

Protestant asserts that although the instant drivers contain a large number of components, none of those components supply power directly to an external load and, therefore, the drivers are similar in function to the solar modules of HQ H080604 and should also be classified in heading 8541, HTSUS. However, as discussed above, the subject drivers act to rectify AC electricity to DC electricity and that functionality is specifically covered by

heading 8504, HTSUS, and not by any provision of heading 8541, HTSUS. Finally, Protestant cites to New York Ruling Letter ("NY") E89000, dated December 22, 1999, in which CBP considered a device identified as the "Frosty Super Bright Red LED lamp." It is described by Protestant as containing a capacitor, a varistor, lead wires, a silicon insulation sleeve, PC board, body, swivel socket, adapter and candelabra, with an LED array protruding from the housing containing the electrical components. CBP classified the device under subheading 8541.40, HTSUS, as an LED. Drawing upon that ruling, Protestant asserts that the presence of "semiconductor components" in the drivers reveals a significant similarity between the drivers and the device of NY E89000 that compels the classification of the drivers under heading 8541, HTSUS. The semiconductor components are described by Protestant as lead wires and capacitors.

The comparison to the device considered in NY E89000 is inapposite. The function of the subject drivers is to rectify electricity and they are not imported with LED arrays. They are clearly not similar to the device of NY E89000.

In summary, heading 8541, HTSUS, does not describe the drivers and the drivers are included eo nomine in heading 8504, HTSUS, as static converters. In particular, the drivers are classifiable in subheading 8504.40.95, HTSUS, which provides for "Electrical transformers, static converters (for example, rectifiers) and inductors; parts thereof: Static converters: Other."

HOLDING:

Pursuant to GRI 1, the LED drivers are classifiable under subheading 8504.40.95, HTSUS, which provides for "Electrical transformers, static converters (for example, rectifiers) and inductors; parts thereof: Static converters: Other."

3.3 In case of **US Customs Ruling No. NY N245322 dated 17.09.2013,** it was held that dimmable LED Drivers are classifiable under CTH 8504. Relevant portion is reproduced here:

"The applicable subheading for the dimmable LED Driver, Part Number 601 will be 8504.40.9510, HTSUS, which provides for "Electrical transformers, static converters and inductors…: Static converters: Other: Rectifiers and rectifying apparatus: Power supplies: With a power output not exceeding 50 W." The rate of duty will be 1.5%".

Port of Import and reply from concerned jurisdictional Commissionerate

4. The applicant in their CAAR-1 indicated that they intend to import the subject goods i.e. LED Drivers at the jurisdiction of office of the Commissioner of Customs, NS-V, JNCH, Mumbai-II. The application was forwarded to the Office of the Commissioner of Customs, NS-V, JNCH for their comments vide letter dated 29.09.2025, 29.10.2025, 20.11.2025 and 09.12.2025. Comments were received from the concerned jurisdictional Commissionerate vide letter dated 29.12.2025 which is read as under-

It is felt necessary to determine whether the product under consideration is 'Rectifiers falling under category of static controverter' or 'mere part of Luminaries other than rectifiers'-

As per open-source information, a rectifier is a basic electrical device whose sole function is to convert alternating current (AC) into direct current (DC), typically producing an unregulated and pulsating DC output. Rectifiers do not control output current, do not regulate voltage precisely, and do not incorporate protection mechanisms.

In contrast, an LED driver is a comprehensive and specialized power-conditioning unit designed specifically to operate Light Emitting Diodes, which are inherently current-driven devices requiring precise current regulation for safe and reliable operation.

An LED driver incorporates multiple functional stages beyond rectification, including voltage regulation, constant-current control, power factor correction (where applicable), electromagnetic interference suppression, and protection against over-current, overvoltage, short-circuit, and thermal faults. These functions are essential to prevent thermal runaway, flicker, lumen depreciation, and premature failure of LEDs. The presence of rectification within an LED driver is incidental and subordinate to its primary function of delivering regulated, LED-specific output power; rectification alone cannot achieve this function.

Technically and functionally, rectifiers are general-purpose components capable of use in a wide range of electrical and electronic equipment, whereas LED drivers are purpose-built devices whose design parameters, output characteristics, and control algorithms are exclusively matched to LED lighting systems. An LED driver cannot be replaced by a rectifier without additional circuitry, nor can a rectifier independently perform the essential functions of an LED driver. Therefore, based on functionality, complexity, and end-use, an LED driver cannot be regarded as merely a rectifier but must be recognized as a distinct and specialized component integral to LED lighting fittings.

In view of above technical, functional, and legal analysis, the classification of the LED driver as a rectifier or as a static converter cannot be sustained. The LED driver derives its essential character not from the mere act of rectification, which is only incidental, but from its primary and dominant function of delivering precisely regulated current with integrated control and protection mechanisms that are indispensable for the operation of LED lighting systems. It is neither interchangeable with nor capable of performing as a general purpose rectifier, and it possesses no independent utility outside LED luminaires. Accordingly, any attempt to classify the LED driver under a general heading applicable to rectifiers or static converters disregards its true nature, principal use, and essential character, and therefore cannot be appreciated under the Harmonized System. Accordingly, classification of the LED driver, under 8504 40 is not sustainable.

On the contrary, the Customs Tariff specifically recognizes and covers 'LED Drivers' under Tariff Item 9405 99 00, which provides for parts of lamps and lighting fittings. The said tariff entry is product-specific and directly identifies LED drivers as components intended for use solely or principally with LED lamps and luminaries. In terms of the settled principle of tariff interpretation, where a product is capable of falling under both a general heading and a more specific heading, precedence must be accorded to the heading which most specifically describes the goods. In the present case, heading 9405, and more particularly Tariff Item 9405

99 00, provides a precise and unambiguous description of the subject goods, whereas any heading under Chapter 85 would only offer a generic description based on a partial or incidental electrical function.

Applying the rule of specific over general as embodied in GIR 3(a), the LED driver merits classification under Heading 9405 rather than under a broad category such as static converters or rectifiers. The LED driver derives its essential character and commercial identity from its exclusive use as an integral part of LED lighting fittings and not from its incidental power conversion function. Accordingly, the existence of a specific tariff entry for LED drivers under 9405 99 00 conclusively displaces classification under any general heading, and reinforces that the correct classification of the subject goods is under CTI 9405 99 00.

Details of Hearing

5. A hearing was held on 12.11.2025 at 12.30 PM. Shri Hans Raj Garg has appeared for the hearing and reiterated the contention submitted with the application. He submitted that subject import goods are 'LED Drivers' merit classification under CTH 8504 more specifically under CTI 85044090 as "Static Converters". He further submitted that product should be classified on the basis of its functionality and not on the basis of claim of being a part.

5.2 Further, in continuation of above hearing, a personal hearing was again held on 19.01.2026 at 11.30 AM. Shri Hans Raj Garg and Bhavin Sundarji appeared for hearing and reiterated the submission filed with the application. They contended that the subject goods are "LED Drivers". That the subject goods are placed between main power and LED light source. That the said LED Drivers works as a static converter. There is no specific classification under HSN regarding the product "LED Drivers". They submitted rebuttal on the department comments that the department claim is under incorrect premises and that the fitment of the said product under the CGST statute is now withdrawn. They submitted the following case laws in support of their contention:

a. Senior India Pvt. Ltd. Vs CC, New Delhi-CESTAT, New Delhi,
b. Hyundai Motor India Ltd. Vs CC, Chennai-II (Imports), CESTAT, Chennai,
c. M/s. Sanmina SCI India Pvt. Ltd. Vs CC, Chennai, CAAR, Mumbai,
d. Valeo India Pvt. Ltd. Vs CC, Mumbai, CAAR, Mumbai
e. CC Shilong Vs Wood Craft Products Ltd. (SC)
f. Hindustan Poles Corporation Vs CCE Calcutta (SC)

They contended that the subject goods i.e. 'LED Drivers' merit classification under CTI 85044090 and not under 9405 as parts of luminaries (residual entry).

5.2 Nobody appeared on behalf of the Department for hearing.

Discussion and findings

6. I have considered all the materials placed before me in respect of the subject goods. I have gone through the submissions made by the applicant during the personal hearing and comments received from the concerned Commissionerate. I proceed to pronounce a ruling on the basis of information available on record as well as existing legal framework.

6.1 At the outset, I find that the issue raised in the question in the Form CAAR-I is squarely covered under Section 28H(2) of the Customs Act, 1962, being a matter related to classification of goods under the provisions of this Act.

6.2 Before deciding the issue, let me deliberate on the legal framework prescribed in Customs Tariff Act, 1975, Chapter/ Section notes along with HSN explanatory notes. As per Rule 1 of GRI, the titles of Sections, Chapters and sub-Chapters are provided for ease of reference only; for legal purposes, classification shall be determined according to the terms of the headings and any relative Section or Chapter Notes.

6.3 Rule 1 of the General Rules for Interpretation provides that the classification of goods shall be determined according to the terms of the headings of the tariff and any relative Section notes or Chapter notes and thus, gives precedence to this while classifying a product. Rules 2 to 6 provide the general guidelines for classification of goods under the appropriate sub-heading. In the event the goods cannot be classified solely on the basis of Rule 1, and if the headings and section or chapter notes do not otherwise require, the remaining Rules 2 to 6 may then be applied in sequential order.

6.4 An LED driver is an electronic device used to power an LED (Light Emitting Diode) lighting system and regulate the current flowing through the LED (Light Emitting Diode). It is designed to match the electrical characteristics of LED lighting, ensuring optimal performance and longevity. LED drivers convert the alternating current (AC) voltage from the power supply into direct current (DC) voltage suitable for driving LEDs. The main purpose of an LED driver is to control the amount of current supplied to the LED system, as LEDs are sensitive to overcurrent and can be damaged if not regulated properly. The LED driver maintains a constant current output despite input voltage changes or LED temperature fluctuations. Thus, LED drivers are self-contained power supply devices that moderate the voltage and current from the electricity source to match the electrical characteristics of a particular LED. As electricity supplies usually operate on mains, an LED driver converts them from AC supply to DC supply ensuring that whatever electric current reaches the LED is usable and safe. This constant current ensures consistent brightness and color temperature of LED lighting.

6.5 CTH 8504 provides :

8504		**ELECTRICAL TRANSFORMERS, STATIC CONVERTERS (FOR EXAMPLE, RECTIFIERS) AND INDUCTORS**	
8504 10	-	*Ballasts for discharge lamps or tubes :*	
8504 10 10	---	Conventional type	u
8504 10 20	---	For compact fluorescent lamps	u
8504 10 90	---	Other	u
	-	*Liquid dielectric transformers:*	
8504 21 00	--	Having a power handling capacity notexceeding 650 kVA	u
8504 22 00	--	Having a power handling capacity exceeding 650 kVA but not exceeding 10,000 kVA	u
8504 23	--	*Having a power handling capacity exceeding 10,000 kVA:*	
8504 23 10	---	Having a power handling capacity exceeding 10,000 kVA but not exceeding 50,000 kVA	u
8504 23 20	---	Having a power handling capacity exceeding 50,000 kVA but not exceeding 1,00,000 kVA	u
8504 23 30	---	Having a power handling capacity exceeding 1,00,000 kVA but not exceeding 2,50,000 kVA	u
8504 23 40	---	Having a power handling capacity exceeding 2,50,000 kVA	u
	-	*Other transformers:*	
8504 31 00	--	Having a power handling capacity not exceeding 1 kVA	u
8504 32 00	--	Having a power handling capacity exceeding 1 kVA but not exceeding 16 kVA	u
8504 33 00	--	Having a power handling capacity exceeding 16 kVA but not exceeding 500 kVA	u
8504 34 00	--	Having a power handling capacity exceeding 500 kVA	u
8504 40	-	*Static converters:*	
8504 40 10	---	Electric inverter	u
	---	*Rectifier :*	
8504 40 21	----	Dip bridge rectifier	u
8504 40 29	----	Other	u
8504 40 30	---	Battery chargers	u
8504 40 40	---	Voltage regulator and stabilizers (other than automatic)	u
8504 40 90	---	Other	u
8504 50	-	*Other inductors:*	

6.6 Further, explanatory notes of heading 8504 are reproduced here:

(II) ELECTRICAL STATIC CONVERTERS

The apparatus of this group are used to convert electrical energy in order to adapt it for further use. They incorporate converting elements (e.g., valves) of different types. They may also incorporate various auxiliary devices (e.g., transformers, induction coils, resistors, command regulators, etc.). Their operation is based on the principle that the converting elements act alternately as conductors and non-conductors.

The fact that these apparatus often incorporate auxiliary circuits to regulate the voltage of the emerging current does not affect their classification in this group, nor does the fact that they are sometimes referred to as voltage or current regulators.

This group includes :

(A) ***Rectifiers*** *by which alternating current (single or polyphase) is converted to direct current, generally accompanied by a voltage change.*

(B) ***Inverters*** *by which direct current is converted to alternating current.*

(C) Alternating current converters and cycle converters *by which alternating current (single or polyphase) is converted to a different frequency or voltage.*

(D) Direct current converters *by which direct current is converted to a different voltage.*

Electrical static converters may be used for different purposes, e.g. :

(1) Converters to supply electricity to drive stationary machines or electric traction vehicles (e.g., locomotives).

(2) Supply converters, such as accumulator chargers (which consist essentially of rectifiers with associated transformer and current control apparatus), converters for galvanising and electrolysis, emergency power packs, converters for installations which supply high-tension direct current, converters for heating purposes and for the current supply to electro-magnets.

Also classified here are converters known as high-tension generators (used particularly with radio apparatus, emission tubes, microwave tubes, ion-beam tubes) which convert the current from any source, usually the mains, into the direct high-tension current necessary for feeding the equipment concerned by means of rectifiers, transformers, etc.

This heading also includes stabilised suppliers (rectifiers combined with a regulator), e.g., uninterruptible power supply units for a range of electronic equipment.

From the above, it is clear that static converters are used to convert electrical energy in order to adapt it for further use. They incorporate converting elements (e.g., valves) of different types. They may also incorporate various auxiliary devices (e.g., transformers, induction coils, resistors, command regulators, etc.). The fact that these apparatuses often incorporate auxiliary circuits to regulate the voltage of the emerging current does not affect their classification in this group. Alternative current converters and Direct current converters are classifiable under static converters.

7. CTH 9405 provides that :

9405 *LUMINAIRES AND LIGHTING FITTINGS INCLUDING SEARCHLIGHTS AND SPOTLIGHTS AND PARTS THEREOF, NOT ELSEWHERE SPECIFIED OR INCLUDED; ILLUMINATED SIGNS, ILLUMINATED NAME-PLATES AND THE LIKE, HAVING A

PERMANENTLY FIXED LIGHT SOURCE, AND PARTS THEREOF NOT ELSEWHERE SPECIFIED OR INCLUDED

- Parts :

9405 91 00 -- Of glass

9405 92 00 -- Of plastics

94059900 – Other

7.1 HSN explanatory notes of heading is reproduced here:

PARTS

The heading also covers identifiable parts of luminaires and lighting fittings, illuminated signs, illuminated name-plates and the like, **not more specifically covered elsewhere**, e.g., :

(1) Suspension assemblies (rigid or chain type) for lighting pendants.
(2) Globe holders.
(3) Bases, handles and cases for hand lamps.
(4) Burners for lamps; mantle holders.
(5) Lantern frames.
(6) Reflectors.
(7) Lamp glasses or chimneys (bottle-necked, etc.).
(8) Small cylinders of thick glass for miner's safety lamps.
(9) Diffusers (including alabaster diffusers).
(10) Bowls, cups, shades (including skeleton wire frames for making lampshades), globes and similar articles.
(11) Chandelier trimmings, such as balls, pear-shaped drops, flower-shaped pieces, pendants, small plates and the like, identifiable by their size or their fixing or fastening devices.

Non-electrical parts of articles of this heading, combined with electrical parts, remain classified here. **Separately presented electrical fittings (e.g., switches, lamp holders, flex, plugs, transformers, starters, ballasts) are excluded (Chapter 85)**. This heading also excludes :

(a) Candles (heading 34.06).
(b) Resin torches (heading 36.06).
(c) Signs, name-plates and the like, not illuminated or illuminated by a light source not permanently fixed, (heading 39.26, Chapter 70, heading 83.10, etc.).
(d) Printed globes, with internal lighting fittings, of heading 49.05.
(e) Wicks for lamps, of woven, plaited or knitted textile materials (heading 59.08).
(f) Glass beads and fancy glass smallwares (e.g., fringes) made of threaded glass beads or bugles and intended for trimming lampshades (heading 70~ 18).
(g) Electrical lighting and signalling equipment for cycles and motor vehicles (heading 85.12).

(h) Electric filament lamps, discharge lamps (including sealed beam lamp units and ultra-violet or infra- red lamps as well as tubes in various complex forms such as scrolls, letter, figures, stars, etc.), arc- lamps and light-emitting diode (LED) light sources (heading 85.39).
(ij) Photographic flashlight apparatus (including electrically ignited photographic flashbulbs) (heading 90.06).
(k) Optical light-beam signalling apparatus (heading 90.13).
(l) Medical diagnostic, probing, irradiation, etc., lamps (heading 90.18).
(m) Decorations, such as Chinese lanterns (heading 95.05).

7.2 General explanatory notes of chapter 94 are reproduced here:

PARTS

This Chapter only covers parts, whether or not in the rough, of the goods of headings 94.01 to 94.03 and 94.05, when identifiable by their shape or other specific features as parts designed solely or principally for an article of those headings. They are classified in this Chapter when not more specifically covered elsewhere.

Parts of prefabricated buildings of heading 94.06, presented separately, are in all cases classified in their own appropriate headings.

In addition to the exclusions referred to in the individual Explanatory Notes below, this Chapter also excludes:

(a) Beadings and mouldings, of heading 44.09.

(b) Grooved strips of particle board, covered with plastics or other materials, intended to be cut and then folded along these cuts into a "U" shape so as to form parts of furniture (e.g., partitions of a drawer) (heading 44.10).

(c) Sheets of glass (including mirrors), marble or other stone or of any other material referred to in Chapter 68 or 69, whether or not cut to shape, unless they are combined with other parts which clearly identify them as parts of furniture (e.g., a mirror-door for a wardrobe).

(d) Springs, locks and other parts of general use as defined in Note 2 to Section XV, of base metal (Section XV), and similar goods of plastics (Chapter 39).

(e) Toy furniture and toy lamps or lighting fittings (heading 95.03).

(f) Collectors' pieces and antiques (Chapter 97).

From the above, it can be implied that parts that are identifiable by their shape or other specific features as parts designed solely or principally for an article of chapter 94 and not more specifically covered elsewhere are classified under chapter 94.

7.3 Since, from the above facts, technical details, explanatory notes and chapter headings from CBIC website, it is clear that LED drivers are not specifically included in any chapter, however, the explanatory notes of heading 8504 provides that

The apparatus of this group are used to convert electrical energy in order to adapt it for further use. They incorporate converting elements (e.g., valves) of different types. They may also incorporate various auxiliary devices (e.g., transformers, induction coils, resistors, command regulators, etc.). Their operation is based on the principle that the converting elements act alternately as conductors and non-conductors.

The fact that these apparatus often incorporate auxiliary circuits to regulate the voltage of the emerging current does not affect their classification in this group, nor does the fact that they are sometimes referred to as voltage or current regulators.

.....

.....

.....

This heading also includes stabilised suppliers (rectifiers combined with a regulator), e.g., uninterruptible power supply units for a range of electronic equipment

Since, the LED drivers are used to convert alternating current to Direct current i.e. primary function and then with the help of additional components i.e EMI filter, PWM, Boost power unit etc desired regulated direct current is obtained to power the LED. Also, heading 8504 includes the rectifiers combined with a regulator, therefore, it can be implied that LED drivers are rectifiers combined with regulators that falls under category of static converters.

7.3.1 HSN Explanatory notes of CTH 9405 for parts, specifically excludes separately presented electrical fittings e.g. Transformer, ballasts etc. from CTH 9405 and provides proper place in chapter 85 which makes provision for "Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles". Goods specified in HSN explanatory notes of CTH 9405 is not exclusive and that rectifiers and static converters fall under the exclusion of CTH 9405.

7.4 From the open source, it is observed that LED drivers, power and control LEDs in countless applications, from **residential lighting** (bulbs, strips, downlights) and **commercial/industrial lighting** (streetlights, high bays, signage) to specialized uses like **automotive lighting, displays** (TVs, monitors), **horticulture**, and even **aquariums**, ensuring consistent brightness, efficiency, and longevity by converting high AC voltage to the precise low DC current LEDs need. Therefore, it can be said that LED drivers are not solely and principally used for articles of chapter 94. Application of LED driver in various field:

7.4.1 **Lighting Applications**

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LED drivers have a wide range of lighting applications in both residential and commercial settings. In residential settings, LED drivers are commonly used in LED bulbs, downlights, and LED strip lights. They help regulate the current flowing through the LEDs, providing the correct voltage and prevention of voltage spikes.

In commercial settings, LED drivers are used in street lights, floodlights, and high-bay lights. They can also be used in more unique applications, such as horticultural lighting and aquarium lighting.

7.4.2 Display Applications

LED drivers are also commonly used in displays, such as television screens, computer monitors, and digital signage. These displays require precise voltage and current regulation to ensure that the LEDs operate at the correct brightness and colour temperature. LED drivers help ensure that the displays are energy-efficient and have a long lifespan.

7.4.3 Backlighting Applications

LED drivers are crucial in backlighting applications, such as in LCD monitors, TVs, and mobile devices. These drivers ensure uniform backlight distribution, high color accuracy, and dimming capabilities. This results in improved image quality, energy efficiency, and user comfort, making them indispensable in today's display technologies.

7.4.4 Automotive Applications

LED drivers are also essential components in automotive lighting. LED lights in cars, trucks, and motorcycles require LED drivers to provide proper voltage and current regulation. LED drivers can enhance the safety of automotive lighting by keeping the lights working efficiently, even in harsh driving conditions.

7.4.5 Horticulture Lighting Application

The agricultural sector has embraced LED technology for horticultural lighting due to its ability to provide specific wavelengths of light optimized for plant growth. LED drivers facilitate the customization of light spectra, intensity, and photoperiods to enhance crop yield, quality, and energy efficiency in controlled environment agriculture.

It is observed that LED drivers are not only limited to the luminaries but have vast application of field. Therefore, it can be implied that LED Drivers are not solely and principally used with the goods of chapter 94. Thus, classification of LED Drivers under chapter heading 9405 as parts can be discarded since the subject goods "LED Driver" are not designed solely or principally for an article of heading of chapter 94.

From the above facts, technical details, chapter notes, general explanatory notes, it is evident that LED driver's primary function is to convert AC to DC. As the explanatory notes

provides that *static converters may also incorporate various auxiliary devices to regulate the voltage of the emerging current does not affect their classification in this group. Further, this heading also includes stabilised suppliers (rectifiers combined with a regulator). As the LED drivers are more specifically covered under heading 8504 by the virtue of explanatory notes. Therefore, LED drivers that convert the AC supply to DC supply and regulate the current are classifiable under CTH 8504, more specifically under CTI 85044090 as other rectifiers if imported standalone.*

However, if LED drivers are imported alongwith the articles of heading 9405, then it merits classification under CTH 94059900 as parts (Other).

8. The applicant has submitted that the LED drivers are to be imported separately and not with the light source/non-electrical parts. Hence, in terms of HSN explanatory notes to the CTH 9405, such electrical components i.e. LED Driver is excluded from the purview of CTH 9405 and at the same time are included in chapter 85.

9. I rely on the judgements in the case of *Commissioner of Customs v. Wood Craft Products Ltd., (1995) 77 ELT 23 (S.C.),* the Hon'ble Supreme Court of India held that in case of doubt, HSN is a safe guide for ascertaining true meaning of any expression used in the Act, unless there is an express different intention indicated in the Customs Tariff itself.

9.2 The decision in the case of *Wood Craft Products Ltd. (supra)* was subsequently followed by the Hon'ble Supreme Court in the case of *CC v. Business Forms, 2002 (142) ELT 18 (S.C.).* This proposition was also affirmed, upheld and followed in catena of cases by various judicial authorities.

10. In view of the above facts and circumstances of the case, I reach to conclusion that

The products in question attracts merit classification under CTH 8504 (Electrical transformers, static converters (for example, rectifiers) and inductors), more specifically under CTI 85044090 as other static converters of the First Schedule of the Customs Tariff Act, 1975.

11. I rule accordingly.

30/11/26

(Prabhat K. Rameshwaram)
Customs Authority for Advance Rulings,
Mumbai.

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