

Environmental Performance Trends by Site

Production site																									
Years ended March 31	Category		USHIO INC. (Harima)	USHIO INC. (Gotemba)	USHIO INC. (Yokohama)	USHIO LIGHTING	NIHON DENSHI GIJUTSU	EPITEX	USHIO AMERICA	CHRISTIE DIGITAL SYSTEMS USA	CHRISTIE DIGITAL SYSTEMS CANADA	BLV	USHIO PHILIPPINES	USHIO (SUZHOU)	ADTEC Engineering	WACOM ELECTRIC CO.,LTD.	USHIO OPTO SEMICONDUCTOR S. INC.	USHIO (SHAOGUAN)	MAXRAY	CDSZ	TAIWAN USHIO LIGHTING	TSUKUBA USHIO	HYOGO USHIO		
2012	INPUT	Total energy input (GJ)	202,277	45,399	12,127	42,242	42,242	4,430	24,820	21,539	69	37,452	83,155	35,814							16,111	10,181	3,406		
		Water used (m3)	44,062	50,055	7,904	5,693	5,693	1,759	15,678	8,246	5,020	3,484	173,497	14,915							7,952	2,064	593		
	OUTPUT	Greenhouse gas emissions (t-CO2)	8,616	1,893	503	1,676	1,676	182	1,041	892	2,918	1,571	2,973	1,410							620	398	141		
		Total waste water emissions (m3)	44,062	50,055	7,904	5,693	5,693	1,759	15,678	8,246	5,020	3,484	173,497	14,915							7,952	2,064	593		
		Total industrial waste volume (kg)	189,846	85,810	7,090	85,118	85,118	14,455	41,508	126,190	421,677	64,359	53,183	8,046							11,105	6,675	4,582		
		Total industrial waste volume (kg)	2,787	0	0	10,222	10,222	1,940	18,845	45,125	77,020	5,570	268	8,046							4,942	720	2,200		
		Effective resource utilization rate	98.5%	100.0%	100.0%	88.0%	88.0%	86.6%	54.6%	64.2%	76.1%	91.3%	99.5%	0.0%							55.5%	89.2%	52.0%		
2013	INPUT	Total energy input (GJ)	188,099	48,275	14,456	47,996	47,996	4,692	23,468	21,899	71,130	37,612	116,014	26,920							15,120	1,652	64		
		Water used (m3)	46,405	44,400	3,109	5,625	5,625	2,024	16,231	7,701	4,234	2,665	76,941	14,819							5,310	770			
	OUTPUT	Greenhouse gas emissions (t-CO2)	7,904	1,940	599	1,897	1,897	193	982	906	2,986	1,591	3,836	1,030							580	68	3		
		Total waste water emissions (m3)	46,405	44,400	3,109	5,625	5,625	2,024	16,231	7,701	4,234	2,665	76,941	14,819							5,310	770			
		Total industrial waste volume (kg)	183,893	79,564	7,450	82,925	82,925	23,275	43,584	131,260	390,514	68,770	68,288	74							10,401	18,411	443		
		Total industrial waste volume (kg)	4,053	27	0	16,053	16,053	1,556	23,672	45,176	67,770	5,540	268	74							4,177	1,252			
		Effective resource utilization rate	97.8%	100.0%	100.0%	80.6%	80.6%	93.3%	45.7%	65.6%	76.5%	91.9%	99.6%	0.0%							59.8%	93.2%	100.0%		
2014	INPUT	Total energy input (GJ)	183,608	55,013	14,565	43,895	43,895	4,909	22,778	22,356	72,417	31,179	81,416	24,939	52,412						13,102				
		Water used (m3)	45,796	45,202	3,863	6,898	6,898	215	1,952	14,725	8,717	4,273	1,457	78,916	24,056	11,316						6,282			
	OUTPUT	Greenhouse gas emissions (t-CO2)	9,802	3,506	777	2,310	36	257	1,152	1,131	1,457	1,550	4,049	1,944	3,356							785			
		Total waste water emissions (m3)	35,237	45,202	3,863	5,009	219	1,266	14,725	8,717	4,273	1,457	78,916	26,216	11,316							6,282			
		Total industrial waste volume (kg)	306,551	61,861	8,891	60,276	10,415	24,257	47,907	101,485	368,217	44,944	91,731	897	20,984							11,617			
		Total industrial waste volume (kg)	1,579	0	0	16,183	0	445	21,979	42,323	66,850	4,110	8,763	897	13,238							4,016			
		Effective resource utilization rate	99.5%	100.0%	100.0%	73.2%	100.0%	98.2%	54.1%	58.3%	81.8%	90.9%	90.4%	0.0%	36.9%							65.4%			
2015	INPUT	Total energy input (GJ)	186,920	55,936	14,296	42,878	712	5,557	19,947	18,501	71,694	28,389	81,514	20,785	53,943		3,419	45,675	17,081						
		Water used (m3)	40,930	47,690	4,238	6,107	204	2,457	16,604	8,462	4,319	1,358	86,512	11,529	12,567	1,859	63,302								
	OUTPUT	Greenhouse gas emissions (t-CO2)	10,120	3,230	727	2,283	38	296	1,008	941	1,433	1,410	4,061	1,616	3,180	1,775	2,362	1,309							
		Total waste water emissions (m3)	35,385	47,690	4,238	4,476	204	2,457	16,659	8,462	4,319	1,358	86,512	10,431	12,572	1,859	63,302								
		Total industrial waste volume (kg)	287,324	53,742	10,064	57,055	3,000	16,780	53,673	91,657	311,867	43,527	95,355	971	21,963		25,549								
		Total industrial waste volume (kg)	1,949	0	0	13,367	0	520	21,431	26,374	56,540	4,720	30,336	971	15,223		5,679								
		Effective resource utilization rate	99.3%	100.0%	100.0%	76.6%	100.0%	96.9%	60.1%	71.2%	81.9%	89.2%	68.2%	0.0%	30.7%		77.8%								
2016	INPUT	Total energy input (GJ)	183,608	55,013	14,565	42,959	662	7,682	19,459	15,623	74,662	27,575	84,608	8,736	61,733	2,088	56,138	30,821	2,739		10,452				
		Water used (m3)	39,492	43,274	4,099	6,530	202	2,845	14,997	7,245	4,347	1,730	80,048	9,640	15,219	1,775	54,410	9,751	446		3,403				
	OUTPUT	Greenhouse gas emissions (t-CO2)	9,851	3,208	720	2,286	34	409	984	94	1,416	1,371	4,221	677	3,633	1,06	2,967	1,448	150		801				
		Total waste water emissions (m3)	36,951	43,274	4,099	4,085	202	1,898	14,997	7,245	4,347	1,730	80,048	8,972	15,219	1,775	54,410	4,453	446		3,403				
		Total industrial waste volume (kg)	278,046	145,013	19,682	110,995	5,116	32,656	43,582	94,457	300,002	48,637	105,103	70	66,738		42,745	2,645	82,979		17,898				
		Total industrial waste volume (kg)	1,940	0	0	11,390	0	657	21,402	26,555	51,030	5,463	33,302	70	21,131		39,617	17,898							
		Effective resource utilization rate	99.3%	100.0%	100.0%	89.7%	100.0%	98.0%	50.9%	71.9%	83.0%	88.8%	68.3%	0.0%	68.3%	#DIV/0!	100.0%	93.6%		52.3%	0.0%				
															*Joined USHIO		*Joined USHIO Group from 2015			*Joined USHIO Group from 2016		*Liquidated in 2014		*Liquidated in 2013	

Non-production site CO2 emission coefficient: 0.555kg-CO2/kwh

Years ended March 31	Category		USHIO INC. (Headquarter)	USHIO INC. (Tokyo Sales Headquarters)	USHIO INC. (Osaka Branch)	XEBEX	USHIO EUROPE	USHIO FRANCE	USHIO UK	USHIO HONG KONG	USHIO SHANGHAI	USHIO ASIA PACIFIC	USHIO ASIA PACIFIC (THAILAND) LTD.	USHIO TAIWAN	USHIO KOREA	USHIO INC. (Kawasaki Branch)	Protosera Inc.	EAVG	CDS UK
2012	INPUT	Total energy input (GJ)	1,481	523	149	1,972	1,264	620	248	7,849	208	641	92	4,878	4,362				
		Greenhouse gas emissions (t-CO2)	69	22	6	88	59	29	12	322	9	6	6	248	275				
	OUTPUT	Total industrial waste volume (kg)	13,467	5,924	400	4,849	1,200	x	240	91,162	1,584	312	72	1,235	697				
		Total industrial waste volume (kg)	0	292	0	1,163	180	636	240	58,255	396	312	72	414	237				
		Effective resource utilization rate	100.0%	95.1%	100.0%	76.0%	85.0%	0.0%	0.0%	36.1%	75.0%	0.0%	0.0%	66.5%	66.0%				
2013	INPUT	Total energy input (GJ)	1,546	580	130	2,479	1,264	620	248	7,293	213	694	78	3,001	2,787				
		Greenhouse gas emissions (t-CO2)	72	24	5	108	59	29	12	299	9	5	5	155	175				
	OUTPUT	Total industrial waste volume (kg)	11,182	6,652	385	7,872	1,200	636	240	49,667	1,772	328	88	727	433				
		Total industrial waste volume (kg)	0	304	0	382	180	636	240	34,747	432	328	88	382	36				
		Effective resource utilization rate	100.0%	95.4%	100.0%	95.2%	85.0%	0.0%	0.0%	30.0%	75.6%	0.0%	0.0%	47.4%	91.7%				
2014	INPUT	Total energy input (GJ)	1,510	583	136	2,489	1,264	620	248	6,081	196	593	66	1,408	2,871				
		Greenhouse gas emissions (t-CO2)	86	31	7	136	59	20	12	468	15	30	5	91	188				
	OUTPUT	Total industrial waste volume (kg)	10,193	6,198	384	7,067	1,200	636	240	33,316	1,987	240	108		32				
		Total industrial waste volume (kg)	249	408	0	408	180	636	240	23,959	495	240	108		32				
		Effective resource utilization rate	97.6%	95.3%	100.0%	94.2%	85.0%	0.0%	0.0%	28.1%	75.1%	0.0%	100.0%		0.0%				
2015	INPUT	Total energy input (GJ)	1,476	579	140	2,121	1,264	620	248	6,357	200	576	101	1,302	3,123	1,831	446		
		Greenhouse gas emissions (t-CO2)	80	29	7	110	59	20	12	489	15	30	7	84	206	93	24		
	OUTPUT	Total industrial waste volume (kg)	11,848	6,649	456	9,530	1,200	636	240	27,432	2,239	240	240	240	240	16,176			
		Total industrial waste volume (kg)	0	1	2	416	180	636	240	20,927	557	240	240	240	240	16,176			
		Effective resource utilization rate	100.0%	100.0%	99.6%	95.6%	85.0%	0.0%	0.0%	23.7%	75.1%	0.0%	100.0%	200.0%	0.0%				
2016	INPUT	Total energy input (GJ)	1,322	610	180,656	2,096	1,264	620	248	6,103	216	584	130	1,354	2,715	1,502	579	3,594	2,739
		Greenhouse gas emissions (t-CO2)	71	31	10	109	59	20	12	470	17	30	9	87	177	76	31	181	150
	OUTPUT	Total industrial waste volume (kg)	21,506	9,920	4	8,728	1,200	636	240	29,109	2,349	240	190		342	2,022		371	10,900
		Total industrial waste volume (kg)	0	0	2,870	446	180	636	240	19,234	584	240	190		30	1,090		371	10,900
		Effective resource utilization rate	100.0%	100.0%	~78827.2%	94.9%	85.0%	0.0%	0.0%	33.9%	75.1%	0.0%	100.0%		91.3%	46.1%			0.0%
*CO2 emissions coefficients: Fiscal 2012 to fiscal 2013: 0.555 kg-CO2/kwh, Fiscal 2014 to fiscal 2016: Japan—Ministry of the Environment’s emissions coefficients for each fiscal year. Overseas—IEA. CO2 Emissions from Fuel Combustion 2013																* Newly established and aggregation started from fiscal 2015	*Joined USHIO Group from 2015	* Aggregation started from fiscal 2016	
PRTR Substance Emission Trends																			